

# NEPAL ELECTRICITY AUTHORITY

## Project Management Directorate

### Marsyangdi-Kathmandu 220 kV Transmission Line Project

ICB-PMD-MKTLP-072/073-03: Design, Supply, Installation and Commissioning of 220 kV Air insulated Substation (AIS) in Matatirtha, Kathmandu and 220kV Gas Insulated Substation (GIS) in Markichowk, Marsyangdi

### CLARIFICATION No. 1 - RESPONSE TO PRE-BID QUERIES

S.No	Clause No.	Bidder's Queries	NEA's Clarification
1.	Volume II_ 01-Section project_ 01-00 P01 -00 Section Project Nepal(220/132kV Matatirtha (Kathmandu) Substation)	<p>220 kV Upper Trishuli 3A Hydro-project double circuit lines are charged at 132 kV voltage levels and terminated at existing 132 kV substation. These line are to be terminated in 220 kV Switchyard in 2.2.1 (b) 2 (two) number 630KVA, 33/0.400kV LT transformer along with associated equipment</p> <p>(i) LT switchgear (AC/DC Distribution boards)</p> <p>(j) 100kVA Outdoor DG Set with accoustic encloser.</p> <p>1. Please give the single line diagram of existing 132kV substation.</p> <p>2. Please confirm whether there are enough room for LT transformer, LT switchgear and DG.</p>	<p>1. Single line diagram of 132kV Matatirtha Substation is attached herewith the clarifications.</p> <p>2. Please refer to the Volume -2 of the bid document, Chapter-01 Section Project, 01-01 Project Annexure.</p> <p>-As per bid requirement a separate DG room is required to be built.</p> <p>-LT switchgear shall be installed in the 220kV Control room under this contract.</p> <p>-LT transformers shall be installed in the suitable place in the switchyard.</p>
2.	Volume II_ CHAPTER 7 LT Transformer	<p><b>10.0 Technical Specification</b></p> <p>14. Vector Group Dyn1</p>	Bidder to follow requirement of Vector group as specified for LT Transformer & POWER Transformer respectively.
	CHAPTER-20 220KV CLASS SPECIFICATIONS FOR TRANSFORMERS	<p><b>Technical Particulars / Parameters of Transformers (220/132/33 kV 1-Phase Auto Transformer)</b></p> <p>1.15 ix Vector Group (3 -ph)</p> <p>YNaoOd11</p> <p>(unless specified differently elsewhere)</p> <p>Please confirm the vector group</p>	



*[Handwritten signature]*


3.	Volume-III_ Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad	<table><tr><td>6.0</td><td>245 kV Bust Post Insulator (Except auxiliary buses of transformer)</td><td></td><td>Nos</td><td>40</td></tr></table> <table><tr><td>D 1</td><td>72.5kV EQUIPMENT</td><td></td><td></td><td></td></tr><tr><td>1.1</td><td>72.5 kV, 1250A, 31.5kA Circuit Breaker (3-phase) with support structure</td><td></td><td>No.</td><td>1</td></tr><tr><td>1.2</td><td>72.5 kV, 1250A,31.5kA Isolators with earth switch (3-phase, DBR type)</td><td></td><td>No.</td><td>1</td></tr><tr><td>1.3</td><td>72.5kV, 1250A, 31.5 kA with 120% extended rating CT.</td><td></td><td>No s.</td><td>3</td></tr><tr><td>1.4</td><td>72.5kV PT.(1-phase)</td><td></td><td>No s.</td><td>3</td></tr><tr><td>1.5</td><td>72.5 kV BPI (1-phase)</td><td></td><td>No s.</td><td>6</td></tr></table> <table><tr><td>D. 2</td><td>33kV Equipments</td><td></td><td></td><td></td></tr><tr><td>1.1</td><td>33 kV, 630A Isolators with out earth switch (3-phase, DBR type)</td><td></td><td>No.</td><td>1</td></tr></table> 1.Please confirm the number of BPI. 2.Please explain the use of 72.5kV equipments in detail. 3.Please explain the use of 33kV equipments in detail.	6.0	245 kV Bust Post Insulator (Except auxiliary buses of transformer)		Nos	40	D 1	72.5kV EQUIPMENT				1.1	72.5 kV, 1250A, 31.5kA Circuit Breaker (3-phase) with support structure		No.	1	1.2	72.5 kV, 1250A,31.5kA Isolators with earth switch (3-phase, DBR type)		No.	1	1.3	72.5kV, 1250A, 31.5 kA with 120% extended rating CT.		No s.	3	1.4	72.5kV PT.(1-phase)		No s.	3	1.5	72.5 kV BPI (1-phase)		No s.	6	D. 2	33kV Equipments				1.1	33 kV, 630A Isolators with out earth switch (3-phase, DBR type)		No.	1	<p>1. The quantity (40nos.) of Bus post insulators mentioned in Vol-III Schedule No. 1: Plant and Equipment including Mandatory Spares to be supplied from abroad is by Employer Assessed Quantities. This is unit rate quantity assessed by the Employer for complete requirement except for auxiliary buses arrangement for spare unit connection. Please also refer Amendment No. 1 for QTY.</p> <p>The quantities required for auxiliary buses for transformer spare unit connections shall be estimated by the Contractor and the price shall be included in Part B-Contractor Assessed Quantities, A-Erection Hardware subsections (b).</p> <p>2. The 72.5kV equipment mentioned in D1 shall be used for 1 no. of LT transformer 33/0.4kV connected with tertiary of POWER Transformer, 630kVA transformer used as a station supply.</p> <p>3. The 33kV equipment mentioned in D2 shall be used for 2<sup>nd</sup> of LT transformer 33/0.4kV, 630kVA transformer used as a station supply.</p>
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4.	Volume II_01-Section project_01-09 Project ANNEXURE-IX Technical parameter for 72.5kV Equipment's & 33kV NCT	<table><tr><td>6.</td><td>Voltage ratio</td><td>33/_/3 / 0.11/_/3 33/_/3 / 0.11/_/3</td></tr></table>	6.	Voltage ratio	33/_/3 / 0.11/_/3 33/_/3 / 0.11/_/3	<b>72.5 kV Voltage transformer insulation level shall be corresponding to 72.5 kV voltage level, however ratio requirement is 33/_/3 / 0.11/_/3 (kV)</b>																																										
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Volume II CHAPTER 1 – PROJECT SPECIFICATION REQUIREMENT (PSR)	2.2.1.1.1.2 <b><u>Air insulated switchgear(AIS) and Other Main Equipment</u></b>  (c) 220kV Surge Arrestors and Bus Post Insulators. 132kV & 72.5kV circuit breakers, isolators, earth switches, current transformers, capacitor voltage transformers, PT and surge arresters as per BPS.	Bidder to follow requirement of bidding documents.
Volume II CHAPTER 1 – PROJECT SPECIFICATION REQUIREMENT (PSR)	<b>11.19 Spare Unit Long term storage &amp; switching arrangement:</b> The spare transformer shall be completely erected, oil filled and commissioned similar to the other Transformers and kept on the foundation after completing all necessary activities for long term storage. Any special maintenance procedure required during long term storage shall be clearly brought out in the instruction manual. All pre commissioning tests on the spare Transformer similar to the unit kept in service shall be carried out by the contractor. Purchaser intends to replace any of the Transformer unit by the completely assembled oil filled spare Transformer fitted with bushings, cooler etc by suitable jumper connection arrangement and without physically shifting of the Transformers. As any unit may be designated as the spare, all units must be prepared accordingly. At Matatirtha substation, scope of work also include spare unit connection with two banks of Transformers , necessary auxiliary buses for 220 kV, 132 kV, 72.5 kV (for connection in Delta formation) and 36 kV( for connection in Neutral formation) and Delta & Neutral formation for two bank is in present scope of work. At Marsyangdi Substation, 220 kV Auxiliary Bus is GIS type, however 132 kV Auxiliary bus is AIS type. Scope of work at Marsyangdi Substation also include Spare unit connection with 220 kV GIS, necessary auxiliary buses (AIS type) for 132 kV, 72.5 kV (for connection in Delta formation) and 36 kV( for connection in Neutral formation) and Delta & Neutral formation for one bank of Transformers.	(1) Bidder to quote as per requirement of bidding document. (2) Please refer reply at S. No. 3





		1.Please confirm the ratio and explain 33kV NCT in detail. 2.Please explain the use of 72.5kV equipments in detail.																										
5.	Volume II_ 01-Section project_ 01-01 Project Annexure I_ B-2.1 Electrical Layout(Plan) of 220/132kV Markichowk (Marsyangdi) substation		1. The rated capacity of LT transformer is 630kVA. 2. Rated voltage of LT transformer is 33/0.400kV. Please refer to I-A Extension of 22/132/33kV Matarirtha Substation Extension and to I-B Extension of 22/132/33kV Marsyangdi Substation Extension the Vol-III (BPS). Please refer A2, The number of LT transformers required in Matatirtha Substation is 2 nos. and in Marsyangdi substation is 1. Quantity & ratings shall be as specified in BPS. Bidder is to quote as per BPS.																									
	Volume-II_ CHAPTER-7: LT TRANSFORMER	<b>10.0 Technical Specification</b> <table><tr><th>S No</th><th>Description</th><th>Unit</th><th colspan="2">Parameters</th></tr><tr><td>1</td><td>Rated Capacity</td><td>kVA</td><td>630</td><td>630</td></tr><tr><td>2</td><td>Rated Voltage</td><td></td><td></td><td></td></tr><tr><td>a)</td><td>HV</td><td>kV</td><td>11</td><td>33</td></tr><tr><td>b)</td><td>LV</td><td>kV</td><td>0.400</td><td>0.400</td></tr></table>	S No	Description	Unit	Parameters		1	Rated Capacity	kVA	630	630	2	Rated Voltage				a)	HV	kV	11	33	b)	LV	kV	0.400	0.400	
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	Volume II_ CHAPTER 1 - PROJECT SPECIFICATION REQUIREMENT (PSR)	2.2.1.1.2 <u>Air insulated switchgear(AIS) and Other Main Equipments</u>  (b) 1 (one) number 630KVA, 33/0.400kV LT transformer along with associated equipment																										
	Volume-III_ Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad	<table><tr><td><b>A2</b></td><td><b>LT TRANSFORMER</b></td><td></td><td></td><td></td></tr><tr><td><b>1.0</b></td><td>630 kVA,33/0.400kV</td><td></td><td>Nos</td><td>1</td></tr></table> 1.Please confirm the rated capacity of the LT Transformer. 2.Please confirm the rated voltage of the LT Transformer. 3.Please confirm the number of the LT Transformer.	<b>A2</b>	<b>LT TRANSFORMER</b>				<b>1.0</b>	630 kVA,33/0.400kV		Nos	1																
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6.	Volume-II_ CHAPTER 1 – PROJECT SPECIFICATION REQUIREMENT (PSR)	<b>4.2 Meteorological Data:-</b> d) The substation locations are lying in the wind speed zone 4 i.e. 47m/s. Please confirm the wind speed.					The wind speed is 47m/s.																									
7.	Volume-III_ Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad	<table><tr><td><b>B</b></td><td colspan="4"><b>245 kV equipment</b></td></tr><tr><td colspan="5"></td></tr><tr><td><b>B1</b></td><td colspan="4"><b>420KV GIS Equipment</b></td></tr></table>	<b>B</b>	<b>245 kV equipment</b>									<b>B1</b>	<b>420KV GIS Equipment</b>				1.Please confirm the rated voltage of the GIS equipment.				It's a typographical error. Please read as follows 245KV GIS Equipment instead of 420KV GIS Equipment.										
<b>B</b>	<b>245 kV equipment</b>																															
<b>B1</b>	<b>420KV GIS Equipment</b>																															
8.	Volume-III_ Schedule No.1: Plant and Equipment including Mandatory Spares to be supplied from abroad	<table><tr><td>b)</td><td>Insulating oil for 53.33MVA , 220/132/33 KV, 1-phase Autotransformer (* 1Lot = Oil for 1Autotransformers )</td><td></td><td>Lot *</td><td>4</td></tr><tr><td colspan="5"></td></tr><tr><td>1.02</td><td>245kV, SF6 GIS ICT bay Module [ Module description as per Technical specification, Cl. No. 2.2.2.1.1, (b) of Section Project ]</td><td></td><td>Set</td><td>2</td></tr><tr><td colspan="5"></td></tr><tr><td>1.03</td><td>245kV, SF6 GIS Line bay Module [ Module description as per Technical specification, Cl. No.2.2.2.1.1, (d) of Section Project ]</td><td></td><td>Set</td><td>8</td></tr></table>	b)	Insulating oil for 53.33MVA , 220/132/33 KV, 1-phase Autotransformer (* 1Lot = Oil for 1Autotransformers )		Lot *	4						1.02	245kV, SF6 GIS ICT bay Module [ Module description as per Technical specification, Cl. No. 2.2.2.1.1, (b) of Section Project ]		Set	2						1.03	245kV, SF6 GIS Line bay Module [ Module description as per Technical specification, Cl. No.2.2.2.1.1, (d) of Section Project ]		Set	8	1.Please confirm the number of 1-phase autotransformer and the number of GIS ICT bay module and line bay module				Bidder is to quote as per BPS
b)	Insulating oil for 53.33MVA , 220/132/33 KV, 1-phase Autotransformer (* 1Lot = Oil for 1Autotransformers )		Lot *	4																												
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9.	Volume II-- 01-Section project-- 01 -00 Section Project Nepal-- 2.2.1	<b>(d) Complete Relay &amp; Protection System as per of Chapter - C &amp; R of the Technical Specifications</b> The protection to be provided on 220kV Lines shall be as under; Main-I Protection shall be distance Protection Scheme as per specification Clause no. 18.8 of section Control & Relay Panel. Main-II Protection shall be Line current differential protection.					Please refer clause no 7.0 of Section PSR ( ORDER OF PRECEDENCE OF DIFFERENT PARTS OF TECHNICAL SPECIFICATION), which states that “In case of any discrepancy between Chapter 1- PSR, Chapter 2-GTR and other technical																									



Volume II-- 15-00 Control Relay and Protection Panels-- 18	<p><b>18.8.</b> The following protections shall be provided for each of the Transmission lines: For 220KV Main-I: Numerical distance protection scheme Main-II: Numerical distance protection scheme of a make different from that of Main –I</p>	<p>specifications on scope of works, Chapter 1-PSR shall prevail over all other chapters.</p> <p>Accordingly 220kV Lines shall be as under; Main-I Protection shall be distance Protection Scheme as per specification Clause no. 18.8 of section Control &amp; Relay Panel.</p> <p>Main-II Protection shall be Line current differential protection. Further it may be noted that Matatirtha-Marsyangdi Double circuit line and Matatirtha –Trishuli Hydro station Double circuit lines are hybrid Line i.e. with 1km 220kV XLPE cable and remaining ACSR conductor. Therefore additional cable differential protection apart from above mentioned protection shall be required.</p> <p>For Matatirtha –Trishuli Hydro station Double circuit lines, for cable portion differential protection is existing in existing 132kV control room. This existing current differential protection shall be used for these lines. Dismantling, re-erection and all necessary modification are under present scope of work . Matatirtha-Marsyangdi Double circuit lines, supply, erection, commissioning of additional cable differential protection is also part of line protection panels for these lines. Price of same is to be included in item” Line Protection Panel (Matatirtha - Marsyangdi )” for each lines</p>
Volume-III-- XIV	<p>ii) Line protection panel : a) Distance Protection relay- Main-1 Set 1 b) Current differential Protection relay- Main-2 Set 1 <b>What kind of protection will be used to 220kV lines protection?</b></p>	



10.	Volume II-- 05-00 Battery and Battery Charger-- 1.1	1.1.2. DC System shall consist of two(2) float-cum-boost chargers and two(2) battery sets for each of 220V and 48 V systems respectively. The standard scheme drawing is enclosed with this specification.	Bidder is required to quote as per BPS .
	Volume II-- 05-00 Battery and Battery Charger-- 1.2	1.2.1. Type The DC Batteries shall be VRLA (Valve Regulated Lead-Acid) type and shall be Normal Discharge type. These shall be suitable for a long life under continuous float operations and occasional discharges. Air-conditioning shall be provided in Battery room the requirement of which has been specified elsewhere in the Technical Specification, Chapter 5: Battery and Battery Charger Page 2 of 13 Rev. No: 00 - NEA Technical Specification. The 220 V DC system is unearth and 48 V DC system is + ve earth system.	
	Volume-III-- J	J Batteries a 220V i 600 AH Nos 2 <b>Whether the DC220V system and DC48V system share one battery set or respectively? If it is respectively , please provide the capacity of the 48VDC battery.</b>	
11.	Volume II-- 15-00 Control Relay and Protection Panels-28	28.1. The fault recorder shall be provided for transmission line and the fault recorder as in-built feature of line distance relay is also acceptable provided the requirements of following clauses are met.	The fault recorder is part of line protection panel. Please refer clause no. 33 ( <u>LINE PROTECTION PANEL (220 &amp; 132kV)</u> of Chapter-15: Control and Relay Panels, related clause in section project and reply at S. No 9.0.
	Volume II-- 15-00 Control Relay and Protection Panels-- 28-- NOTES--	LINE PROTECTION PANEL (220 & 132kV) 4.Fault Recorder 1 Set NIL <b>Fault recorder is not found in Volume III but in these doc. Consider configuring by doc.</b>	
12.	Volume II-- 08 Chapter FIRE PROTECTION combined-- 2.06.03	e) Provision for sending data to Remote Control Unit for the following What kind of protocol should be used between fire protection system and remote control unit.	For Substation Automation basic Monitoring requirements are Status of display of Fire protection system, Air conditioning system and other requirements mentioned in Chapter 17 Substation Automation system. Bidder is to quote as per provision of bidding documents.



13.	Volume-II(Technical Specifications for Substation)-- CHAPTER I– PROJECT SPECIFICATION REQUIREMENT PSR) ANNEXURE– VI SPECIFICATION OF REVENUE/TARIFF ENERGY METER--	Specification for Revenue Meter & Metering (Instrument) Transformer General The units shall be suitable for operating in Outdoor environment and shall be manufactured by International Reputed ISO 9001 Company Energy Meter The Energy Meter shall have the following minimum requirement <b>But In Volume III, the substation isn't configured Revenue Meter &amp; Metering (Instrument) Transformer ?</b>	The energy meters shall be provided in the respective Relay Panels for 220kV lines and ICTs. The specification of the energy meter is provided in 01-06 Project Annexure - VI																												
14.		There is no description of 72.5kV device protection ,video surveillance system, UPS system ,so is it nesscery to configure related equipment?	Provision of bidding document shall prevail.																												
15.	CIVIL	1. Please provide the meteorological and hydrological condition as well as flood water level .	Please refer clause 11.1 of Chapter PSR, Technical Specification, The Bidders are advised to visit Sub-stations site and acquaint themselves with existing facilities, the topography, infrastructure, etc.																												
16.		2. Please provide the data of basic ground acceleration and the geological report of the original 132kV substation.																													
17.		3. Please provide the topographic map, if we do not have it , all the foundation at site is presumed as natural foundation.																													
18.	Volume-III : SASEC: Power System Expansion Project MARSYANGDI KATHMANDU 220kV T/L PROJECT	<table border="1"> <tr> <td><b>1</b></td><td><b>Transmission Equipment</b></td><td></td><td></td></tr> <tr> <td>(i)</td><td><b>SDH Equipment ( STM- 4 MADM, upto 3 MSP protected directions)</b></td><td></td><td></td></tr> <tr> <td>(a)</td><td>Base Equipment (Common cards, Cross-connect/control cards, Optical base cards, Power supply cards, power cabling, other hardware &amp; accessories including sub-racks, patch cords, DDF etc. fully equipped excluding (ii) and (iii) below)</td><td>No.</td><td>1</td></tr> <tr> <td>(ii)</td><td><b>Optical Interface/SFP# for</b></td><td></td><td></td></tr> <tr> <td>(a)</td><td>S1.1</td><td>Nos.</td><td>4</td></tr> <tr> <td>(b)</td><td>S1.1 **</td><td>Nos.</td><td>2</td></tr> <tr> <td>(c)</td><td>L4.2</td><td>Nos.</td><td>2</td></tr> </table> <p>Note** : Consider for existing equipment installed at Matatitha (Existing) and Optical Interface Card(s)/SFP shall be suitable to</p>	<b>1</b>	<b>Transmission Equipment</b>			(i)	<b>SDH Equipment ( STM- 4 MADM, upto 3 MSP protected directions)</b>			(a)	Base Equipment (Common cards, Cross-connect/control cards, Optical base cards, Power supply cards, power cabling, other hardware & accessories including sub-racks, patch cords, DDF etc. fully equipped excluding (ii) and (iii) below)	No.	1	(ii)	<b>Optical Interface/SFP# for</b>			(a)	S1.1	Nos.	4	(b)	S1.1 **	Nos.	2	(c)	L4.2	Nos.	2	<p>1. The length of the line is 85 km approximately.</p> <p>2. Please refer Appendix-A, Chapter 18 of technical specification.</p> <p>3. New SDH equipment is required in 220kV control and communication room. The existing 132kV control room has SDH equipment with NARI Development Co. Ltd., China make in Matatirtha substation and COMTEL Networks in Marsyandi Substation.</p>
<b>1</b>	<b>Transmission Equipment</b>																														
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(b)	S1.1 **	Nos.	2																												
(c)	L4.2	Nos.	2																												







22.	General Volume II / Chapter-1 (PSR)/ 11.8	<b>Training at Manufacturer's Works</b> We assume the training at manufacturer's works will be common for both Matatirtha & Markichowk Substations. Kindly confirm.	Yes. The understanding is correct.
23.	General Volume II / Chapter-1 (PSR)/ 11.8	<b>Training at Manufacturer's Works</b> We assume the training at manufacturer's works for Sr. No. 2 will be maximum of 10 days for all equipment (Switchyard and GIS). Kindly confirm.	Yes. The training days shall be 10 days, which excludes the travel days and holidays etc.
24.	General Volume I / Section-3 /2.5/7, 10	<b>Evaluation &amp; Qualification Criteria / Substation Automation System (SAS)</b> There two options available for SAS qualification Sr. No. 7 & 10, kindly confirm which can be followed.	The qualification criteria mentioned in S.No.7 is valid and shall be followed.
25.	General Volume I / Section-3 /2.4.2 (a)	<b>Specific Experience</b> Kindly define the term "SUBSTANTIAL COMPLETION of PLANT & SERVICES".	"Substantial completion of Plant and Services" shall mean the substation is complete in construction or above and ready for charging and operation. The completion certificate shall be issued by the Employer.
26.	General	<b>Equipment GTP Formats for Technical Bid</b> Please provide the specific formats for equipment GTP to full up in compliance to technical specification.	The Bidders are required to prepare GTP/Data Sheet in compliance to the Technical Specifications.
27.	Vol. II/ Project Specification Requirement (PSR) <b>2.0/2.1.1/1.2.1/2.2.1</b>	Construction of a new 220kV AIS type (Air Insulated Substation) and <b>extension 132 kV AIS substation</b> at Matatirtha (Kathmandu) with the provision of following bays as per <b>Single Line Diagram</b> From SLD (C/ENGG/NEPAL/MATATIRTHA/SLD/01) and BPS we understand that 132 KV side is not included in present scope of work (except 120 KV LA ) and there is no extension work of 132kV AIS as suggested in clause 1.2.1-Kindly confirm.	Yes. The understanding is generally in order. The bays used for Trishuli Line, the bays shall be used for connection of 132kV side of 220/132kV Transformers.
28.	Electrical Layout Plan C/ENGG/NEPAL/ MATATIRTHA (Kathmandu)/ Layout/01; Rev.0	<b>Orientation of 220 KV Line</b> In Layout NEA has provided cable termination at the both end of 2 nos. of 220 KV lines i.e. Upper Trishuli 3 A, Hydro-project 220kV double circuit lines.- Pls. confirm which direction we need to consider for 220 KV incoming Line.	220 kV Cable termination for 2 nos of 220 KV lines i.e. Upper Trishuli 3 A are 132 kV Side. 220 kV Cable termination is not in the present scope of work. Same is covered in other contract. However connections of respective bays with cable terminations are under present scope of work.
29.	Electrical Layout Plan C/ENGG/NEPAL/	Kindly provide the AutoCAD copy of layout.	Please refer tender drawings.





	MATATIRTHA (Kathmandu)/ layout/01; Rev.0		
30.	132kV cable laying Chapter 22: EHV XLPE power cable; clause 8, 6.2	<b>TREFOIL/FLAT FORMATION</b> Cables shall be laid in trefoil/flat formation ( <b>as per bidding documents</b> ) for entire route. The contractor shall submit drawings and arrangements for Employer approval. Please confirm the laying formation for 132kV cables. Please also confirm the depth of laying.	This shall be decided in the detail engineering during construction.
31.	220/132kV Transformer protection panels	Please confirm where the protection panels for power transformers shall be placed. We presume the panels for existing 2 nos 132kV Matatirtha-Trishuli line bays are placed in existing control room. Do we need to replace those panels with new transformer protection panels? Or should we place the new protection panels in switchyard panel room?	The new protection panels for 220/132kV transformers shall be placed at switchyard panel rooms to be constructed under this contract. The 132kV line panels used for Matatirtha-Trishuli lines placed in 132kV lines shall not be used further except current differential for cable portion.
32.	33kV cable	We presume that the 33/0.433kV Transformer in LT yard shall be connected with AIS connection and no 33kV cable and termination is envisaged.	Yes. The understanding is correct.
33.	Vol. II/ Project Specification Requirement (PSR) 2.0/2.1/2.1.1/iii- (i)	At 132 kV two line bay are existing (currently used for charging of Upper Trishuli 3A Hydro Project 220 kV Line on 132 kV voltage level (as mentioned above) which shall be used for two transformer bay i.e. for 2 (two) banks of 6X53.33MVA, 220/132/33kV, 1-phase auto-transformers and one spare unit of transformer with suitable connection arrangement for spare transformer. From this clause we understand that 220 KV incoming line (220kV underground cable and associated accessories) is not under present scope of work.-Pls. Confirm.	Yes. The understanding is correct.
34.	Vol. II/ Project Specification Requirement (PSR) 2.2/2.2.1/(b)	2 (two) number 630KVA, 33/0.400kV LT transformer along with associated equipment Pl. specify the LT yard location as layout is showing only one no of LT transformer.	The LT yard location for second 33/0.400kV Station transformer is at 33kV bays of 132/33kV switchyard area existing substation.
35.	Vol. II/ Project	For cable portion of Matatirtha –Trishuli Hydro station Double	Please refer reply at S.No.9. For dismantling, re-erection and all necessary



	Specification Requirement (PSR) 2.2/2.2.1/(d)	circuit lines, existing differential protection of cable portion to be utilized. Dismantling, re-erection and all necessary modification are under present scope of work and same shall be part of line protection of Matatirtha –Trishuli Hydro station lines. No BOQ is available for Dismantling & re-erection and modification work.--Pl. Confirm.	modifications of existing differential protection of cable shall be filled on Vol.-III, Sch-4(a)-I(A), E-E1.
36.	Vol. II/ Project Specification Requirement (PSR) 2.2/2.2.1/(d)	Model: GE-B30 Bus differential relay). Integration of Bus Bar by modification in necessary AC/DC wiring/cabling etc, providing auxiliary and /or Trip relays for 132 kV bays is in the present scope Please confirm that GE-B30 has provision for extension of two nos. bays.	Please refer clause 11.1 of Chapter PSR, Technical Specification, The Bidders are advised to visit Sub-stations site and acquaint themselves with existing facilities, the topography, infrastructure, etc.
37.	Transformer Specification/ Oil Storage Tank 8.0/8.3	Oil Storage Tank capacity Capacity of Oil storage tank is not specified.-Pl. Provide.	For 10 cubic meter capacity.
38.	Transformer Specification	Cu Loss, No Load Loss & Aux. Loss Kindly provide the losses of transformers.	Bidders are required furnish the losses of transformers.
39.	Transformer Specification	Transformer Impedance & its applicable tolerance . Pl. let us know the Impedance between HV-Tertiary (at different taps) and IV-Tertiary and the applicable Tolerances.	Bidders is to quote as per provision of bidding documents.
40.		Existing earthmat layout Please provide the details of the existing earthmat layout specifying grid spacing as we presume that existing Earthmat shall be extended for the 220 KV Line bays / trafo bays under present scope.	Please follow the Vol-2, Chapter-12 Switchyard Erection, clause no 8.0-Grounding systems.
41.		Cable trench layout Please provide the existing cable trench layout with sections. Please also confirm that there is sufficient space for present scope of works.	New cable trench is under the scope for construction of 220kV substation and extension of 132kV.
42.		Line lengths Please provide the line lengths for Matatirtha-Markichowk and Matatirtha-Trishuli line.	The line length of Matatirtha-Markichowk is approximate 85km and Matatirtha-Trishuli line is approximate 45km.
43.	Electrical Layout Section-C/ENGG/ NEPAL/MATATIRTHA	Pl. provide complete ICT bay section .	220 kV ICT bay section drawing is already provided, which shall be further engineered by the bidder during detailed engineering.



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	(Kathmandu)/ Layout/01; Rev.0		
44.	Specification for Revenue Meter & Metering (Instrument) Transformer Annexure-VI	Accuracy class 0.1 Please clarify the requirement of 0.1 class energy meters when the accuracy of instrument transformer is only 0.2 Please confirm, whether 0.2 class energy meters acceptable.	The accuracy of energy meters to be supplied is 0.1 class.
45.	Specification for Revenue Meter & Metering (Instrument) Transformer Annexure-VI	Other Features to be included c) Remote Download Modem (in built)- We understand that measurement values to LDC will be from gateway (part of substation automation system) through offered bay control units. Energy meters are used only for revenue purpose and hence there is no need for any modem part of energy meters. Please clarify.	The data for energy meters are also required to be transferred to LDC.
46.	Line protection panel (220 & 132kV)	9. Cut-out and wiring with TTB for supplied energy meter Please clarify whether we need to consider supply of energy meters or only cut-out & wiring for supplied energy meter.	The supply of energy meters are under the scope of Contract.
47.	Transformer Protection Panel (220/132kV)	8. Cut-out and wiring with TTB for supplied energy meter Please clarify whether we need to consider supply of energy meters or only cut-out & wiring for supplied energy meter.	The supply of energy meters are under the scope of Contract. Its part of respective line/Transformer protection panel.
48.	Control Relay & Protection panel 33 KV LINE Control & Protection Panel ( For Substation with Automation)	Electronic Trivector Meter with 0.2 Class Accuracy With RS 485, RS 232 & Front Optical port) Specification of energy meter is different from the specification mentioned under Annexure-VI. Please clarify which document to be considered.	33 KV LINE Control & Protection Panel are not envisaged under present scope of work.
49.	Substation Automation 8. Power Supply	Power for the substation automation system shall be derived from substation 220V DC system. 2 Nos. of Inverter of minimum 2KVA capacity shall be provided for servers, gateways station HMI disturbance recorder evaluation unit and its peripheral devices e.g. printer etc. In the event of Power failure, necessary safeguard software shall be built for proper shutdown. Inverter shall be connected to 220V DC independent /132source and should be used to drive 1No. Each server/HMI/Gateway so that in case any failure of DC power supply	Your understanding is generally in order.



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		<p>system is not affected.</p> <p>We understand that total 2 nos. of 2kVA inverters to be considered for the complete substation automation system per substation. Where in one no. of 2 kVA inverter shall be connected to Main Server, Workstation 1 and Gateway 1. Second Inverter shall be connected to Standby Server, Workstation 2 &amp; Gateway 2 so that failure of one inverter will not affect the complete system. Please clarify, whether our understanding is correct or not.</p>	
50.	Vol. II/ Project Specification Requirement (PSR) and C/ENGG/NEPAL/MARSYANGDI (MARKICHOWK) / Layout/01; Rev.0 2.0 / 2.1.2 / i	<p>132 kV Switchyard: 132 kV switching scheme will be double main bus (DM) type. Details of bays are as below: From SLD (C/ENGG/NEPAL/MATATIRTHA/SLD/01) we understand that the scope for 132 KV Switchyard is limited for only 1 no transformer bay.—Pl. Confirm.</p> <p>As per C/ENGG/NEPAL/MARSYANGDI (MARKICHOWK) the marked scope shows two 132kV bays in present scope of work. Please provide the layout showing present scope of work in 132kV yard.</p>	In 132 kV only Bus work for 4 bays and one ICT bay is under present scope of work. Bidder is to quote as per BPS.
51.	Vol. II/ Project Specification Requirement (PSR) 2.0 / 2.1.2/ ii	<p>132 kV Switchyard: 132 kV switching scheme will be double main bus (DM) type. Details of bays are as below: <b>Only gantry structures for two no. of future line bays and two future transformer bays. --- Pl. clarify</b> which gantry structure is referred as a present scope of work in the layout.</p>	Structures required for Bus work/bus extension.
52.	Electrical Layout Plan C/ENGG/NEPAL/MARSYANGDI (MARKICHOWK) / Layout/01; Rev.0	<p>Layout Plan</p> <p>Layout is showing a clouded portion and it seems like our present scope of work. But as per PSR/BPS &amp; SLD only one transformer bay need to erect for 132 KV Switchyard .----<b>Pl. Clarify the actual scope of work.</b></p>	Please refer reply at S.No. 50 .
53.		Pl. provide Layout – Section drawing to estimate the desire hardware quantities.	Section drawings to be develop by contract during detailed engineering based on provision of bidding documents.
54.	Vol. II/ Project Specification Requirement (PSR), BPS and C/ENGG/NEPAL/	The 630KVA, 33/0.400kV auxiliary transformers for Matatirtha (Kathmandu) & Marsyangdi (Marki Chowk) substation shall be located in LT station area. At both the substations HT side of one auxiliary transformer shall be connected with tertiary of 220/1132/33 kV auto transformer bank.	Please refer to the reply at S.No. 5 .

	MARSYANGDI (MARKICHOWK) / Layout/01; Rev.0 6.3 / A2(1.0)	As per section project one LT transformer shall be located in LT yard and one shall be connected to tertiary of Auto Transformer bank. But in Markichowk only one LT transformer is in scope of work. Please confirm where this LT transformer is to be connected. As per tender layout there are two LT transformers rated 400kVA; 11/0.433kV. please confirm	
55.	Vol. II/ Project Specification Requirement (PSR) 6.3	Provision for adding another LT transformer in future for alternate supply is also required. Please clarify the provision for adding another LT transformer, do we have to consider one more incomer in the main switch board.	As Marsyangdi S/S has 1 no. of 630KVA, 33/0.400kV auxiliary transformer at present scope, the LT switchgear (AC/DC Distribution board as mentioned in Vol.II Chapter-1,PSR -2.2.2.1.2(i)) shall be supplied with all provision for future 630KVA, 33/0.400kV auxiliary transformer.
56.	Priced Schedule Schedule No.4	Installation and Other Services In schedule 4 no of 245 KV BPI is 40 <sup>III</sup> whereas in schedule 1 same has been mentioned as 90 nos.—Pl. Confirm.	Please refer Amendment No.-1.
57.		Pl. specify the existing bus conductor and conductor between equipment/ jumper & dropper.	Please refer clause 11.1 of Chapter PSR, Technical Specification, The Bidders are advised to visit Sub-stations site and acquaint themselves with existing facilities, the topography, infrastructure, etc.
58.		We presume that for 220KV Line conductor, hardware & and all other accessories are excluded from the present scope of work. —Pl. confirm.	220 kV lines are not under present scope of work. Bidder is to quote as per provision of bidding documents.
59.		Please provide existing cable trench layout and sections. Also confirm if sufficient space is available in existing trenches for present scope of work.	Please refer reply at S. No. 43. In addition to existing Cable trenches, required new cable trenches are also covered under present scope of work.
60.	Volume – III Price Schedule No. 1	For Price schedule no. 1 there is a separate column for taxes and duties. However GCC clause no. 14.2 states that import duties and VAT shall be paid by the employer. Request you to provide the details of Customs/VAT rate applicable in Nepal.	The separate column for taxes and duties for Vol-III, Schedule-1 is not mandatory to be filled by the Bidder.
61.	Volume – III Price Schedule No. 2	For Price schedule no. 2 there is a separate column for taxes and duties. We request the employer to provide the prevailing VAT structure in Nepal.	The separate column for taxes and duties for Vol-III, Schedule-2 is not mandatory to be filled by the Bidder.





62.	Volume – III Price Schedule No. 4	In price schedule No.4 we find that the price to be quoted is inclusive of all taxes & duties in the grand summary (Schedule 5 ), the prices quoted are exclusive of taxes and duties for Schedule 1 & schedule 2 whereas VAT is included in Schedule 4. Kindly clarify.	The BPS Vol-III, Schedule-4(a) shall be filled exclusive of custom taxes and VAT liable to be paid in Nepal.
63.	Volume-I Section-1 & Section-8 ITB 21.3 & SCC 13.3.2	As per ITB 21.3, the Bank Guarantee shall be from any eligible countries. However, as per SCC 13.3.2, we understood that only advance Payment security and Performance security issued by bank outside Nepal must be counter guaranteed by any registered bank in Nepal which is not required for Bid Security. Kindly clarify.	Yes. The understanding is correct.
64.	Volume-I Section—7 GCC 14	We request you to clarify the benefits /exemptions which are available for local items e.g sand steel/consumables for this project	Please follow Vol-I Section-7 GCC-14 and Section-8 SCC-14 Taxes and Duties. VAT shall be implied on local items.
65.	General	Please furnish the soft copy (Excel) of price schedule.	Soft copy has been provided on purchase of Bid document.
66.	Electrical layout plan of 220kV/132kV Matathirtha (kathmandu) Drg.No.C/ENGG/NEPAL/MATATHIRTH (KATMANDU)/LAYO UT/01, Rev.0	Please provide the sectional drawings for 220kV Matathirtha - 220kV Trishuli line termination to understand the scope, Since it is not clear in the Electrical plan drawing.	Please refer reply at S.No. 43 .
67.	Electrical layout plan of 220kV/132kV Matathirtha (kathmandu), Drg.No.C/ENGG/NEPAL/MATATHIRTH (KATMANDU)/LAYO UT/01, Rev.0	Please confirm the termination of 220kV Matathirtha - 220kV Trishuli line is over head/Cable.	The 220kV cable termination for Matathirtha-Trishuli line shall be done in another previous Contract. It shall be connected with overhead line to 220kV bays under this scope through overhead conductor.
68.	Electrical layout plan of 220kV/132kV Matathirtha (kathmandu), Drg.No.C/ENGG/NEPAL/MATATHIRTH (KATMANDU)/LAYO UT/01, Rev.0	We presume that bidder scope is limit to termination of 132kV Cable & SAS upgradation as per BPS only in existing 132kV/33kV/11kV switchyard. Please confirm.	Bidder is to quote as per provision of bidding documents.





69.	Electrical layout plan of 220kV/132kV Matathirth (katmandu), Drg.No.C/ENGG/NEPAL/MATATHIRTH (KATMANDU)/LAYO UT/01, Rev.0	Please Confirm the Location of Township building (B-type, C-Type) & Car parkings.	This shall be done during detail engineering at the available spaces in the substation compound.
70.	Single Line Diagram of 220/132/33kV Matatirtha (Katmandu) Substation, Drg.No: C/ENGG/NEPAL/MAT ATIRTHA/SLD/01,Rev.0	We presume that Complete ICT-3 bay is future and we have not considered any equipment for ICT-3 bay shown in SLD (Drg.No: C/ENGG/NEPAL/MATATIRTHA/SLD/01, Rev.0). Please confirm.	Yes. The understanding is correct.
71.	Single Line Diagram of 220/132/33kV Matatirtha (Kathmandu) Substation, Drg.No: C/ENGG/NEPAL/MAT ATIRTHA/SLD/01,Rev.0	Since the Bus Bar Rating of 220kV is 3200A , the Bus coupler rating shall also be 3200A.However in SLD & BPS it is mentioned that Bus coupler rating is only 2500A. Please clarify	Bidder is to quote as per provision of bidding documents.
72.	Single Line Diagram of 220/132/33kV Matatirtha (Katmandu) Substation, Drg.No: C/ENGG/NEPAL/MAT ATIRTHA/SLD/01,Rev.0	We presume that requirement of 245kV Current transformers current ratio, burden, accuracy classes etc., shall be followed as per Technical Specification, Chapter 3 : Switchgear, instrument transformers Rev 00 (NEA), TABLE - IIA against shown in SLD bill of quantity. Please confirm.	Bidder is to quote as per BPS. current ratio, burden, accuracy classes etc., shall be followed as per Technical Specification, Chapter 3 : Switchgear, instrument transformers Rev 00 (NEA), TABLE – IIA and Amendment No - 1
73.	Electrical layout plan of 220kV/132kV Matathirtha (kathmandu), Drg.No.C/ENGG/NEPAL/MATATHIRTH (KATMANDU)/LAYO UT/01, Rev.0	We presume that location of control room shown in the Electrical layout plan of 220kV/132kV Matathirtha (kathmandu), Drg.No.C/ENGG/NEPAL/MATATHIRTH(KATMANDU)/LAYO UT/01, Rev.0 is for the new 220kV Switchyard only and for 132kV switchyard control room is existing in seperate location. Please clarify and provide the actual location & layout of existing control building for 132kV switchyard also.	Yes. The understanding is correct. The location of 132kV Control room is shown in the new drawings attached.
74.	Bid price Schedule -I, I, a,b,c,d,e	We presume that LT switchgear i.e 415V Main switchboard, 415V ACDB, 415V MLDB, 415V Emergency LDB, 220V DCDB is for	Yes. The understanding is correct.



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		present scope (i.e for 220kV Switchyard) only and for 132kV, 33kV & 11kV is already existed. Hence we are not considering the any feeders for existing 132kV, 33kV & 11kV. Please confirm.	
75.	Bid price Schedule-I, Q, 6 (i) & (ii)	Please confirm the Capacity of the battery or load requirement/duty cycle/aging factor/design margin for sizing the battery required for SMPS based 48V DCPS system and also confirm the type of battery charger to be considered.	Please refer reply at S.No. 10.
76.	Erection hardware for 33kV Equipment	Please add the line item for the 33kV Erection hardware at LT station area in bid price schedule.	Please refer Amendment No. 1.
77.	Bid price Schedule -I, C - illumination System.	Please furnish the detailed specification, SLD for illumination to be considered for Township (B-type, C-Type) and small power system.	These drawings to be developed by contractor based on provision of bidding documents.
78.	Bid price Schedule -I, C - illumination System.	For Township only illumination mentioned in BPS. Separate line item not available for Earthing, lightning protection, HVAC etc. Please confirm.	Required earthing, lightning protection are part of building. Air-conditioners are covered in employer assessed quantities.
79.	Electrical layout plan of 220kV/132kV Matathirtha, Drg.No.C/E NGG/NEPAL/MATATHIRTH(KATMANDU)/ LAYOUT/01, Rev.0	As per layout, Primary side of Auto transformer 220/132kV, LA is to be directly connected to CT. However BPI to be required as LA cannot take the load of bending and direct loading of Aluminum tube. Please clarify	Such details shall be finalized during detail engineering. Bidder is to quote as per provision of bidding documents.
80.	Schedule I, SI.No.E, Relay panels (with automation), point no.(1), a	Since we are having the 4 line bays, circuit breaker relay panel with auto reclose shall be 4 nos and circuit breaker relay panels with out auto reclose shall be 4 no's as per SLD as against to BPS quantity. Please clarify.	Bidder is to quote as per BPS.
81.	Schedule I, SI.No.E, Relay panels (with automation), point no.(1), d & Section project, page 3 of 28, clause no. 2.1.1	We presume that Current differential relay for other end of line (i.e. Marsyangdi (Marki chowk) is not under bidder supply. Please clarify.	Bidder is to quote as per BPS. Current differential relay for Matathirtha- Marsyangdi (Marki chowk) lines are covered under respective line protection panels for these line at both the substation. However for other lines, current differential relays for other ends are considered separately.
82.	Schedule I, SI.No.H, Teleprotection & communication	As per section project clause no.2.2.1 (f), for 220kV D/C Lines, Digital protection Coupler (2 Nos. at each end shall be used for teleprotection application), i.e total 8 nos required, but where as in	Bidder is to quote as per BPS. Digital protection Coupler for Matathirtha-Marsyangdi (Marki chowk) lines are





	equipment, point no. (a) & Section project, Clause no, 2.2.1 (f)	Bid price schedule 6 nos only mentioned. Please clarify.	covered under respective substation end. Digital protection Coupler for other end of other line are considered separately.
83.	Section project, Page 25 of 28, Clause no. 11.16	As per section project clause no. 11.16, one number each energy meter for the record and revenue purpose is to be provided for each 220/132kV bays (Transfer & Bus coupler bays to be excluded), but there is no line item for the same in bid price schedule. please confirm and include the item in bid price schedule.	Energy meter for the record and revenue purpose are part of line/Transformer protection panels. Price of same is to be included in line/Transformer protection panels.
84.	Section project, Page 25 of 28, Clause no. 11.16	Energy meter's to be supplied for present scope of bays only and supply for remote end is not in bidder scope of supply. Please clarify	Yes. The understanding is correct.
85.	Section project, Clause no. 11.4	We presume that cable Size mentioned (1/2C x 300 Sq.mm) is typographical error and assumed as Power Cable for oil filtration units of transformers is 3.5C x 300 Sq.mm. Please confirm	Yes. The understanding is correct.
86.	Technical Specification, Chapter 3: Switchgear, Instrument Transformers.	Please confirm the Material of winding for the instrument transformers.	Bidder is to quote as per provision of bidding documents
87.	Technical Specification, Chapter 12: SE, Rev.no.00-NEA	As per the clause no. 7.3, technical parameters of Bus post insulators, point no..O (Technical Specification, Chapter 12: SE, Rev.no.00-NEA) mentioned as 3165 which is lower than 25mm/kV. Please confirm the creepage distance for 145kV bus post insulator to be considered.	It's a typographical error. It shall be 3625mm.
88.	Technical Specification, Chapter 12: SE Rev No - NEA, Clause no. 8.4.2	Please specify/confirm the earth fault current duration & corrosion allowance to be considered for earth conductor sizing. Further any current division factor to be considered for the same please specify.	Provision of bidding documents shall prevail.
89.	Technical Specification, Chapter 6: Lighting System, Clause no. 1.1.6	Please specify/confirm the maintenance factor to be considered for outdoor illumination design.	The minimum lux level to average lux level ratio should not be less than 0.3 (i.e $E_{min}/E_{av} > 0.3$ ). The maintenance factor for outdoor illumination design shall be considered as 0.65
90.	Outdoor illumination, earthing, lightning	We presume that outdoor illumination, street lighting , earthing & Lightning shall be considered for present scope of bays (i.e 220kV Switchyard) only. Please confirm.	Outdoor illumination, street lighting , earthing & Lightning shall be considered for present scope of work.





91.	Technical Specification, Chapter 6: Lighting System, Clause no. 1.1.9	As per technical Specification, Lighting system, clause no.1.1.9 street lighting (peripheral) inside switchyard fencing shall be in bidders scope. Please clarify the type of lighting fittings (HPSV/LED/Solar based LED).	Solar based LED are not envisaged for street lighting for subject package
92.	Technical Specification, Chapter 12: SE, Rev.No:00-NEA, Clause no 10.2	As per section erection, clause no.10.2, One no.of bay marshalling kiosk shall be provided for each 220kV and 132kV bay under present scope. But there is no line item in BPS for the same. Please clarify	Its part of Erection Hardware item.
93.	Electrical Layout Plan of 220/132kV Matathirth (Kathmandu) Drg.No. C/ENGG/NEPAL/ MATATHIRTH (KATMANDU/ LAYOUT/01)	As per BPS item No.A2., Number of LT transformers shall be two. For one transformer incoming supply shall be from ICT tertiary source. However incoming supply for the second transformer not mentioned in scope of works. Please clarify.	Please follow S.N. 5 .
94.	CHAPTER-20 2.11, Page no.3, Dynamic Short Circuit Test requirement	Please note that we had successfully conducted Dynamic Short circuit test on 105MVA 400/220/33kV Single Phase Auto Transformer. However we would like to inform you that this transformer is not fully comparable with the required transformer as per the conditions mentioned in IEC60076-5. Hence we request you to accept the SC calculations as per IEC60076-5 for this transformer without comparing with the SC tested transformer during design review. Kindly please accept.	Same is in accordance to specification requirement which state that” Bidder / Manufacturer should have successfully carried out Dynamic Short Circuit Test on any rating of 220 kV or above voltage class transformer as on the originally scheduled date of bid opening and shall enclose the relevant Test Report / Certificate along with bid. Accordingly relevant Dynamic Short Circuit Test requirement will be considered. However design review of offered 220 kV class transformers shall be carried out based on design of short circuit tested 220 kV or <u>above voltage class transformer.”</u>
95.	CHAPTER-20, Clause no.3.6.2 & 6.1 Page 16	Auto transformer Cooling system in both clauses (Clause no.3.6.2 & 6.1) are contradictory. Please clarify the type of cooling system.	Cooling shall be as per 6.1. i.e. 60% / 80% /100% ONAN/ ONAF / (OFAF or ODAF) OR ONAN/ ONAF1 /ONAF2



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96.	CHAPTER-20 6.1- (1.7) ,viii , Max Partial discharge level at Um, Page no.36	Value of partial discharge level for Auto transformer shall be as per IEC 60076. Please accept.	Provision of bidding document shall prevail.
97.	CHAPTER-20 Clause no.8, Oil Storage Tank - Minimum Capacity : As mentioned in BPS	Please furnish the Capacity of storage tank for Auto Transformer.	Please refer reply at S.No 37 .
98.	General	Kindly furnish soil resistivity for estimation of Earthing conductor spacing & above & below ground risers.	It is under the Contractor's scope of work.
99.	General	Please provide the existing 132kV/33kV/11kV substation drawings (Over all plot plan & section, Outdoor Cable trench layout, earthing layout and existing control building drawings. Etc.,	Please refer clause 11.1 of Chapter PSR, Technical Specification, The Bidders are advised to visit Sub-stations site and acquaint themselves with existing facilities, the topography, infrastructure, etc.
100.	General	Whether we can submit the type test reports of higher rating with similar design. Please clarify.	Provision of bidding document shall prevail.
101.	General	Kindly mention the type and material of conductor for 220kV outgoing lines of Matatirtha, Katmandu substation.	ACSR Twin Moose for each circuit of 220kV Marsyangdi feeder and ACSR Twin Bison for each circuit of 220kV Trishuli feeders. It also include 220 kV cable as mentioned in our reply at S.No 9 .
102.	General	Kindly provide us the Contour Layout	Contouring and Site leveling is under present scope of work. Bidder is to quote as per BPS & provision of bidding documents.
103.	Electrical Layout Plan of 220/132kV Marsyangdi (Markichowk) Drg.No. C/ENGG/NEPAL/MAR SYANGDI (MARKICHOWK)/LAY OUT/01)	Please provide the sectional drawings for 132kV transformer bay with bay passing isolation and bus connection with existing bus bar to understand the scope and existing material details.	Please refer reply at S.No. 53.
104.	Electrical Layout Plan of 220/132kV Marsyangdi (Markichowk) Drg.No.	As per SLD 220/132/33kV Marsyangdi (Markichowk) Substation, Drg.No: C/ENGG/NEPAL/MARSYANGDI (MARKICHOWK)/SLD/01, Rev.0, One number of ICT and spare	Please refer reply at S.No. 50





	C/ENGG/NEPAL/MAR SYANGDI (MARKICHOWK)/LAYOUT/01)	unit is in present scope, But where as per Electrical Layout Plan of 220/132kV Marsyangdi (Markichowk) Drg.No. C/ENGG/NEPAL/MARSYANGDI (MARKICHOWK)/LAYOUT/01), Two no's of ICT bay are shown as present scope. We have not considered any material for ICT bay-2. Please clarify.	
105.	Electrical Layout Plan of 220/132kV Marsyangdi (Markichowk) Drg.No. C/ENGG/NEPAL/MAR SYANGDI (MARKICHOWK)/LAYOUT/01)	We presume the equipments shown for 132kV Bus extension are 132kV Bus PI's not 132kV Bus PT as shown in the layout. Please confirm.	In 132kV bus extension Bus supports and BPI are shown. 132 kV Bus PT are existing.
106.	Electrical Layout Plan of 220/132kV Marsyangdi (Markichowk) Drg.No. C/ENGG/NEPAL/MAR SYANGDI (MARKICHOWK)/LAYOUT/01)	As per layout, LT transformer 400kVA, 11/0.433kV mentioned as two numbers, where as in bid price schedule-1, page 13 of 25, One number of 630kVA, 33/0.400kV mentioned. Please clarify the scope of supply.	Please refer reply at S.No 5 .
107.	Standard SLD for AC & DC System (Drg.No. C/ENGG/STD/LT/SLD/01)	As per Standard SLD for AC & DC System (Drg.No. C/ENGG/STD/LT/SLD/01), two number of incoming supply required, but where as in bid price Schedule-1, Sl.No.A2, Page 13 of 25, one number of LT transformer only mentioned for incoming supply to MSB. Please clarify.	Please refer reply at S.No 5. However, For Marsyangdi Substation AC LT panel shall have facilities for 2 nos. of incoming supply.
108.	Bid price Schedule -1, I, a,b,c,d,e Page no.16 of 25	We presume that LT switchgear i.e 415V Main switchboard, 415V ACDB, 415V MLDB, 415V Emergency LDB, 220V DCDB is for present scope (i.e for 220kV Switchyard) only and for 132kV, 33kV & 11kV is already existed. Hence we are not considering the any feeders for existing 132kV, 33kV & 11kV. Please confirm.	The LT switchgear i.e 415V Main switchboard, 415V ACDB, 415V MLDB, 415V Emergency LDB, 220V DCDB is for present scope (i.e for 220kV Switchyard) of work.
109.	Single Line Diagram of 220/132/33kV Marsyangdi (Markichowk) Substation, Drg.No: C/ENGG/NEPAL/	Please clarify 145kV Current transformer current ratio, burden, accuracy classes etc., Since the current ratio mentioned in Technical Specification, Chapter 3: Switchgear, Instrument transformers rev.00 (NEA) are not matching with the current rating given in the bid price schedule.	Please refer Amendment No. 1.



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	MARSYANGDI (MARKICHOWK)/SLD /01, Rev.0		
110.	Bid price Schedule-I, Q. 5 (i) & (ii), Page 17, 18 of 25	Please confirm the Capacity of the battery or load requirement/duty cycle/aging factor/design margin for sizing the battery required for SMPS based 48V DCPS system and also confirm the type of battery charger to be considered.	Please refer reply at S.No 10.
111.	Section project, Page 25 of 28, Clause no. 11.16	As per section project clause no. 11.16, one number each energy meter for the record and revenue purpose is to be provided for each 220/132kV bays (Transfer & Bus coupler bays to be excluded), but there is no line item for the same in bid price schedule. please check and include the item in bid price schedule.	Please refer reply at S.No. 83 .
112.	Section project, Page 25 of 28, Clause no. 11.16	Energy meter's to be supplied for present scope of bays only and supply for remote end is not in bidder scope of supply. Please clarify	Yes. The understanding is correct.
113.	Section project, Clause no. 11.4	We presume that cable Size mentioned (1/2C x 300 Sq.mm) is typographical error and assumed as Power Cable for oil filtration units of transformers is 3.5C x 300 Sq.mm. Please confirm	Please refer reply at S.No. 85 .
114.	Bid price Schedule -I, C - illumination System, Page 20 of 25	For Township only illumination mentioned in BPS. Separate line item not available for Earthing, lightning protection, HVAC etc. Please confirm.	Please refer reply at S.No. 78 .
115.	Bid price Schedule -I, C - illumination System, Page 20 of 25	Please furnish the detailed specification, SLD for illumination to be considered for Township (B-type, C-Type) and small power system.	Please refer reply at S.No. 77 .
116.	Schedule I, Sl.No.H, Teleprotection & communication equipments, point no. (a) & Section project, Clause no, 2.2.2.1.2 (f)	As per section project clause no.2.2.2.1.2 (f), for 220kV D/C Lines, Digital protection Coupler (2 Nos. at each end shall be used for teleprotection application),i.e total (8+8) nos required, but where as in Bid price schedule-I, Sl.No.H, (8+6) nos only mentioned. Please clarify.	Please refer reply at S.No. 82 .
117.	Schedule I, Sl.No.E, Relay panels (with automation), point no.(1), c	Total 8no's of 220kV Lines are in present scope of work. Hence 8 no's of the Current differential relay for other end of lines required. But in bid price schedule 6no's only mentioned. Please clarify.	Please refer reply at S.No. 81 .
118.	Technical Specification,	As per the clause no. 7.3, technical parameters of Bus post	Please refer reply at S.No. 87 .



	Chapter 12: SE, Rev.no.00-NEA	insulators, point no.O (Technical Specification, Chapter 12: SE, Rev.no.00-NEA) mentioned as 3165 which is lower than 25mm/kV. Please confirm the creepage distance for 145kV bus post insulator to be considered.	
119.	Technical Specification, Chapter 12: SE Rev No - NEA, Clause no. 8.4.2	Please specify/confirm the earth fault current duration & corrosion allowance to be considered for earth conductor sizing. Further any current division factor to be considered for the same please specify.	Please refer reply at S.No. 88 .
120.	Technical Specification, Chapter 6: Lighting System, Clause no. 1.1.6	Please specify/confirm the maintenance factor to be considered for outdoor illumination design.	Please refer reply at S.No. 89 .
121.	Outdoor illumination, earthing, lightning	We presume that outdoor illumination, street lighting , earthing & Lightning shall be considered for present scope of bays (i.e 220kV Switchyard) only. Please confirm.	Please refer reply at S.No. 90 .
122.	Technical Specification, Chapter 6: Lighting System, Clause no. 1.1.9	As per technical Specification, Lighting system, clause no.1.1.9 street lighting (peripheral) inside switchyard fencing shall be done. Please clarify the type of lighting fittings (HPSV/LED/Solar based LED).	Please refer reply at S.No. 91 .
123.	CHAPTER-20 2.11, Page no.3, Dynamic Short Circuit Test requirement	Please note that we had successfully conducted Dynamic Short circuit test on 105MVA 400/220/33kV Single Phase Auto Transformer. However we would like to inform you that this transformer is not fully comparable with the required transformer as per the conditions mentioned in IEC60076-5. Hence we request you to accept the SC calculations as per IEC60076-5 for this transformer without comparing with the SC tested transformer during design review. Kindly please accept.	Please refer reply at S.No. 94.
124.	CHAPTER-20, Clause no.3.6.2 & 6.1 Page 16	Auto transformer Cooling system in both clauses (Clause no.3.6.2 & 6.1) are contradictory. Please clarify the type of cooling system.	Please refer reply at S.No. 95 .
125.	CHAPTER-20 6.1- (1.7) ,viii , Max Partial discharge level at Um, Page no.36	Value of partial discharge level for Auto transformer shall be as per IEC 60076. Please accept.	Please refer reply at S.No. 96 .
126.	CHAPTER-20 Clause no.8, Oil Storage Tank - Minimum Capacity : As mentioned in BPS	Please furnish the Capacity of storage tank for Auto Transformer.	Please refer reply at S.No. 37 .





127.	General	Kindly furnish soil resistivity for estimation of Earthing conductor spacing & above & below ground risers.	Please refer reply at S.No. 98.
128.	General	Please provide the existing 132kV/33kV/11kV substation drawings (Over all plot plan & section, Outdoor Cable trench layout, earthing layout and existing control building drawings. Etc.,	Please refer reply at S.No. 99.
129.	General	Whether we can submit the type test reports of higher rating with similar design. Please clarify.	Please refer reply at S.No. 100.
130.	General	Kindly mention the type and material of conductor for 220kV outgoing lines of Matatirtha, Katmandu substation.	Please refer reply at S.No. 101.
131.	General	Please mention the type of crane whether single girder or double girder to be used for each GIS hall.	Provision of bidding documents shall prevail.
132.	General	Kindly provide us the Contour Layout	Please refer reply at S.No. 102.
133.	Volume II, Chapter-I, Project Specification Requirement Cl.no : 2.2.1, (iii), (n) Cl.no : 2.2.2.3, (q)	As per referred clause the Security room is in bidders scope. We trust that, the required civil items for security room building such as (Excavation, PCC, RCC, reinforcement, Structural steel) are paid under below respective items of Price schedule. "Volume-III, Schedule -4, I-A, Part-C, (Sl.no : 1,2,3,4,6,7)" "Volume-III, Schedule -4, I-B, Part-C, (Sl.no : 1,2,3,4,6,7)" Please confirm.	Provision of bidding documents shall prevail.
134.	Volume II, Chapter-I, Project Specification Requirement Cl.no : 2.2.1, (iii), (f) Cl.no : 2.2.2.3, (j)	As per referred clause, the underground water tank is in bidders scope. We had received drawing of ground water tank along with tender document & not underground water tank. We presume that, only ground water tank is in bidders scope and paid in Sl.no . 21(iii) of BPS ,Schedule - 4. Kindly confirm. if not kindly add an item for underground water tank & provide the drawing.	Provision of bidding documents shall prevail. Bidder is to quote as per provisions of bidding documents.
135.	Volume II, Chapter-I, Project Specification Requirement Cl.no : 2.2.1, (iii), f, n, d Cl.no : 2.2.2.3, j,	As per referred clause the below civil works are in bidders scope. Please provide the following drawings to estimate the quantum of work. 1. Car parking Shed (10 cars) 2. Approach road 3. Quarters building (B,C,D type) & Transit camp.	Provision of bidding documents shall prevail. Bidder is to quote as per provisions of bidding documents.
136.	Volume II, Chapter-I, Project Specification	As per referred clause ,the Quarters building (B,C,D type) & Transit camp civil works are in bidders scope.	Provision of bidding documents shall prevail. Bidder is to quote as per provisions





	Requirement Cl.no : 2.2.1,(iii),n Cl.no : 2.2.2.3,j,	Please provide the following drawings to estimate the finishes qty of the buildings. 1. Building Plan with dimension 2. Elevation of drawing 3. Section details.	of bidding documents.
137.	Volume II, Chapter-1, Project Specification Requirement Cl.no : 2.2.1	We trust that, dismantling of Road, drain & other structures are not in Bidders scope (for 220kV AIS SS at Matatirtha). Please confirm.	Provision of bidding documents shall prevail. Bidder is to quote as per provisions of bidding documents.
138.	Volume II, Chapter-1, Project Specification Requirement Cl.no : 2.2.2.3	We trust that, Dismantling of any building, Retaining wall, Road, drain & other structures are not in Bidders scope (for 220kV GIS SS at Markichowk). Please confirm.	Provision of bidding documents shall prevail. Bidder is to quote as per provisions of bidding documents.
139.	GA Drg : C/ENGG/NEPAL/MAR SAYANDI(MARKICH OWK)/LAYOUT/01	As per referred layout, We understand that the Civil & structural works within the clouded area portion within boundary is only in bidders scope. Please confirm our understanding is correct.	Your understanding is generally in order.
140.	GA Drg : C/ENGG/NEPAL/MAR SAYANDI(MARKICH OWK)/LAYOUT/01 & GA Drg: C/ENGG/ NEPAL/MATATHIRT (KATHMANDU)/ LAYOUT/01	As per the scope of work the transit camp ,Quarters buildings, Car parking shed is in bidders scope. However in referred layout the above buildings are not indicated. Kindly locate the buildings in the layout and furnish the drawing.	These details shall be finalized during detail Engineering. Detailed layout to be developed by contractor during detail engineering and approved by Employer.
141.	Volume II, Chapter-1, Project Specification Requirement Cl.no : 2.2.1 Cl.no : 2.2.2.3	We trust Rock anchoring is not required for the civil foundation works for the proposed Substations ( Matatirtha & Marsyangdi). Please confirm. If not kindly add an item for the same in Price schedule.	Provision of bidding documents shall prevail. Bidder is to quote as per provisions of bidding documents.
142.	GA Drg : C/ENGG/NEPAL/MATAT HIRTH(KATHMANDU)/ LAYOUT/01, Note:4	As per referred clause ,Burried cable trench for laying power cables is in the Scope of the Contractor. However, there is no item in BPS for the same. Kindly add an item for the same. Also please provide the Burried cable trench drawing & Specification	Please refer reply at S.No 143. Buried cable trench drawing & design is in scope of contractor.



143.	GA Drg : C/ENGG/NEPAL/MAT ATHIRTH(KATHMAN DU)/LAYOUT/01 Note : 4	As per referred clause ,132kV Cable termination structure is in the Scope of the current bid. We trust 132kV cable termination structure qty and Civil works are paid in unit rate basis under respective items of Price schedule. "Volume-III, Schedule -4,I-A, Part-C, (Sl.no : 1,2,3,4,6,7)". Please confirm.	Your understanding is correct.
144.	Volume III - Price Schedule -2, I-A, Extension of 220/132/33kV Matatirtha & Volume III - Price schedule - Schedule -2, I-B, Extension of 220/132/33kV Marsyangdi Substation Cl.no : P (a,b,c) Pg:4/25) & Cl.no : P (a,b,c) (Pg: 16/25)	As per referred clause, Structural steel of the tower & Equipment support structure is paid in MT basis. We trust that, the total weight is inclusive of all LM, towers ,Girders, Tertiary Equipment,delta formation, neutral CT,SA and NGR's & Non-standard Structures etc. Please confirm.	(i)For spare unit of 220/132/36 kV auto transformer connection through auxiliary buses, Neutral formation and delta formation structures are included in Part-B: CONTRACTOR ASSESSED QUANTITIES item no A-b, for Matatirtha substation and A-c for Marsyangdi Substation.  (ii)Other structures such as LM, Tower, Girder, other equipment support structures {except mentioned at (i) mentioned} are to be paid in MT on unit rate basis.
145.	Volume II, Chapter- 1,Project Specification Requirement Cl.no : 2.2.1,(iii),(a) Cl.no : 2.2.2.3,(iii),(e)	As per referred scope of works, the fire resistant walls between Trafo & reactors are in bidders scope. However in Price shedule there is no separate item for the finishes of fire resistant wall Kindly include the same in BPS.	The item of excavation, PCC, RCC and reinforcement steel for construction of fire wall shall be measured and paid under respective items of BPS. No finish other than RCC surface for fire wall has been envisaged.
146.	General	We wish to inform that, Rain water Harvesting is not included in Scope of this current bid but it is required for the Substations. Please add an item for the same in the Price schedule.	Bidder is to quote as per BPS.
147.	GA Drg : C/ENGG/NEPAL/ MATATHIRTH(KATH MANDU)/LAYOUT/01	In the referred layout, it is seen that one nalla is passing through proposed SS. We presume that it shall be completely filled with available earth upto the proposed FGL & there is no need of diversion of nalla. Please confirm. However if diversion is required, we presume the same is not in bidders scope of work. However if in bidders scope kindly suggest suitable way for diversion and include the items in BPS.	Diversion of nalla if required shall be carried out during detailed engineering, same shall be dealt as per provision of contract and specifications.





148.	Volume II, Chapter-1, Project Specification Requirement Cl.no : 2.2.1 Cl.no : 2.2.2.3	Please furnish the following inputs for proposed substations (Matatirtha & Markichowk) to ascertain the quantum of civil works involved in Substations. a) Contour Map indicating spot levels of existing Ground Level. b) Finished Ground level.	Surveying/Contouring is in the scope of successful bidder. FGL shall be decided during detailed engineering.
149.	Volume II, Chapter-1, Project Specification Requirement- Cl.no : 2.2.1, Cl.no : 2.2.2.3	Please furnish the Soil report of existing substation near by the proposed substation (Matatirtha & Markichowk) to ascertain the quantum of civil works involved.	Soil investigation is in the Contractor's scope of work.
150.		Please confirm the mounting position of OLTC, namely, is OLTC connected on high voltage side or on medium voltage side?	The OLTC is connected to high voltage side.
151.	As per chapter-20 for transformer, item no. 2.5	DGA is mentioned to be supplied, but there is no specific requirement. Please provide specific requirements for DGA.	On line DGA equipment is not envisaged under present scope.
152.	As per chapter-20 for transformer	There is no requirement for country of origin of components. Do you have recommended manufacturers or can we select the manufacturer just as per our design?	The Employer's preferred list of manufacturers for selected items of Plant and Equipment have been mentioned in Vol.-II,01-Section Project, Annexure 01-03. Incase Bidders choose to select manufacturers other than Employer's preferred list then the equipment shall be of equal or higher quality as specified in the bid document and Manufacturer's capability as mentioned in Vol-I, Section-3, 2.5-Subcontractors,item No.-1. For other equipment mentioned in BPS the Bidder can select manufacturers of their own which meets the technical specifications and manufacturing capability as per Bid Specifications.
153.		Please provide the impedance values of auto transformer and LT transformer. And please inform us if deviation could be accepted.	Bidder is to quote as per provision of bidding documents.
154.	As per chapter-20 for transformer, item no. 6.1	Rated capacity on different ratings shall be clarified as specified ratings are not logical, it's indicated ONAN/ONAF1/ONAF2 60%/80%/100%, but the ratings for HV and MV winding are 10/33.33/53.33, and the rating for LV winding is 1/2/5MVA, which	Please follow the data the under the column 53.33MVA for the scope under this contract. For cooling requirement also see reply at S.No 95 .



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		are contrary to the specified 60%/80%/100%, ONAF1 rating shall be between 33.33MVA and 53.33MVA and 60%/80%/100% makes sense in this way, generally, the ratings for tertiary winding shall be 1/3 rating of HV/MV winding, so 1/2/5MVA for tertiary winding shall be increased.	
155.	As per chapter-20 for transformer, item no. 6.1	It's specified in technical requirement that the impedances on ONAN rating are 8.3%/10%/12.3%, 10.3%,12.5%/15.4% on ONAF1 rating, in this way, the impedances value on ONAF2 rating shall be above 10.3%,12.5%/15.4%, theoretically, the impedance is proportional to the capacity, obviously, 10%,12.5%=80%, so according to our understanding, impedances on ONAF2 shall be 10.3%,12.5%/15.4%, correspondingly, the impedances on ONAF1 shall be 8.3%/10%/12.3%, and impedances on ONAN rating shall be approximately 6.2%/7.5%/9.25%, please confirm or specify the impedances on different ratings and taps.	Please refer reply at S.No 154.
156.	As per chapter-20 for transformer	According to our previous experience in Nepal, It's required "Each three phase transformer until shall be provided with local OLTC control cabinet, cooler control cabinet and RTCC panel" in the tender document, but the object of transformer in this project is single phase autotransformer, please specify if RTCC (Remote Tap Changer Control Panel) and AVR (Automatic Voltage Regulator) are in the scope of supply.	Yes. RTCC panel, local OLTC control cabinet, cooler control cabinet are in the scope of the supply and part of auto Transformers.
157.		Please provide the penalty standard for transformer loss.	It is mentioned in Vol-I, Section-3, 1. Evaluation, 1.2.4-Functional guarantees of Equipment. Also, follow the Vol-I, Section-9, Appendix-8.
158.	As per chapter -3 for Switchgear Circuit breakers, item no 8.11	Circuit breaker shall be operated by spring charged mechanism or hydraulic mechanism or a combination of these. But we only find the description of spring operated mechanism, please confirm if the spring operated mechanism will be the only one accepted, or hydraulic mechanism is also accepted.	Provision of bidding documents shall prevail. Bidder is to quote as per provisions of bidding documents.
159.	As per chapter -3 for Switchgear Circuit breakers	We are not sure about that if you accept three phase electrical linkage operation or three phase mechanical linkage operation or both about 245kv circuit breakers and if you accept the three phase mechanical linkage operation or split phase operation about 145kv	Provision of bidding documents shall prevail. Bidder is to quote as per provisions of bidding documents.





		circuit breakers from your description, please provide more details about this.	
160.	As per chapter -3 for Switchgear Circuit breakers	We can't find any details about 72.5kv CB, only 33kv CB. Thus, we are not sure what kind of CB do you need. Please provide detail description for 72.5kv CB and inform us what kind of CB should be supplied.	Please refer Annexure-IX of Chapter- PSR, for 72.5 kV equipment parameters in conjunction with other parts of specification.
161.		Please provide detailed technical specification for 72.5kV CT and VT.	Please refer reply at S.NO. 160 .
162.		Please provide technical datasheet for us to fill in, if necessary.	Please refer reply at S.NO. 160 .
163.		Please provide single line diagram for 72.5kV and 33kV.	Bidder is to quote as per provision of bidding documents.
164.	As per 01-03 List of preferred make Annexure-III, list of preferred(shortlisted) make	The bidders may offer equipment/brands other than those listed above that are better or equivalent with regard to quality and performance substantiated with appropriate. We would like to confirm whether it will be fine that we provide other brand with all required document. Will you reject our proposal if we use these brand's manufacturers?	Please Refer to the reply of S.N. 152.
165.	Regarding Matatirtha S/S:	Please provide more detailed single line diagram which includes 33kV system and 132kV system existing system.	Please refer clause 11.1 of Chapter PSR, Technical Specification, The Bidders are advised to visit Sub-stations site and acquaint themselves with existing facilities, the topography, infrastructure, etc..
166.	“	Please provide 220kV D/C THP line electrical section drawing (According to electrical layout plan, it is different from 220kV D/C new Marsyangdi line)	Please refer reply at S.No.53. In Marsyangdi line jack Bus for line termination is required, as line (cable) terminations are on opposite site to the Transfer Bus, however in 220kV D/C THP line jack Bus is not required, as cable termination is transfer Bus side.
167.	“	Please confirm whether 72.5kV system and equipment shall be supplied.	Bidder is to quote as per provision of bidding documents.
168.	“	Please confirm if the 220kV line current transformer is between the circuit breaker and the isolator.	For CT position please refer SLD. It is not between Isolator & CB.
169.	Regarding Marsyangdi S/S	Please provide 132kV electrical section diagram.	Please refer reply at S.No. 53 & 166.



782

170.	“	Please provide a more detail single line diagram which includes 33kV system and 132kV existing system.	Please refer reply at S.NO. 165 .
171.	Volume II “08 Chapter FIRE PROTECTION combined.pdf” 2.05.00 Water Supply System	for 220kV and 132kV level substations water for hydrant & HVW system shall be supplied by one electrical motor driven pump of rated capacity 273m <sup>3</sup> /hr. at 70MWC head, with another pump of same capacity , driven by diesel engine, shall be used as standby. Water storage tank with two compartments of adequate capacity shall be provided ..... Please clarify whether the contractor should provide a new and complete water supply system for two substations, or the contractor should expand and renovate the existing water supply system for two substations based on this requirement, if the Expansion and renovation proposal will be adopted, please provide the information of the existing water supply system of two substations, including system and arrangement. If the contractor should provide a new water supply system for two substations, please provide the water source information, including water quality, interface point location between the owner and contractor.	Please refer BPS, as per BPS, Fire fighting building & system is under present scope of work. Other details such as water source details etc shall be furnished during detail engineering to successful bidder.
172.	Volume II	Please provide the limit boundary line and fence line of the two substations.	Bidder is to quote as per provision of bidding documents.
173.	Volume II “A-2.1 Electrical layout (Plan & Section) of 220/132/33kV Matatirtha (Kathmandu) substation” “B-2.1 Electrical Layout(Plan) of 220□ 132kV Markichowk (Marsyangdi) substation”	Because the dimensions in the drawings are not very clearly, could you please provide us a complete and clear AutoCAD version general plan of the substation? In order to better understand the proposal of bidding document and provide a reasonable offer, we expected to get the following information from bidding document and drawing: 1. The existing and new built civil facility including road, fence, trench and interface point R The existing and new built electrical facility	Please refer reply at S.NO. 29 & 57 .
174.	Volume II “01-00 Section Project Nepal.pdf”	(b) 2 (two) number 630KVA, 33/0.400kV LT transformer along with associated equipment We understand that the 33/0.4kV auxiliary transformer shall be fed	Please refer reply at S.NO. 3 & 5 .





	2.2.1(A) New 220kV AIS type (Air Insulated Substation) and extension 132 kV AIS substation at Matatirtha (Kathmandu)	from 33kV side (tertiary winding) of 220/132/33 kV auto transformer bank, Could you please provide 33kV single line diagram of two substations. This can help us understand how the 33/0.4kV transformer be connected to 33kV bus of main transformer.	
	2.2.2.1.2 Air insulated switchgear(AIS) and Other Main Equipments	(b) 1 (one) number 630KVA, 33/0.400kV LT transformer along with associated equipment.	
175.	Volume II “01-00 Section Project Nepal.pdf” 2.2.1 (A) New 220kV AIS type (Air Insulated Substation) and extension 132 kV AIS substation at Matatirtha (Kathmandu)	We don't find any information about the interface of 220kV HV cable between the contractor and the owner, would you please give us some description about interface in drawing or bidding document.	220kV cable and its termination are not under present scope. It is under previous contract. From cable termination to connections in respective bays are under present scope. Details of cable terminations will furnish to successful bidder during detail engineering.
176.	Volume II “01-00 Section Project Nepal.pdf” 2.2.2 Construction of a new 220kV GIS (Gas Insulated Substation) type Substation and extension of 132 kV AIS substation at Marsyangdi (Markichowk)	We don't find any information about the interface of 220kV transmission line between the contractor and the owner, would you please give us some description in bidding document or in drawing.	Please refer reply at S.NO. 175
177.	Volume II “A-1.1 Single Line diagram of 220/132kV Matatirtha (Kathmandu) Substation.pdf” Volume II A-2.1 Electrical layout	There are two 220kV reserved line circuits for future , but in electrical layout, there is not the reserved bay for these two 220kV future circuits, please clarify.	Only space is available for future 220 kV Lines. Bidder is to quote as per provision of bidding documents.



	(Plan & Section) of 220/132/33kV Matatirtha (Kathmandu) Substation		
178.	<p>Volume II "01-00 Section Project Nepal.pdf" 2.2.2.1.2 Air insulated switchgear(AIS) and Other Main Equipments</p> <p>Volume II "B-2.1 Electrical Layout(Plan) of 220□132kV Markichowk (Marsyangdi) substation.pdf"</p>	<p>(b) 1 (one) number 630KVA, 33/0.400kV LT transformer along with associated equipment We understand that the auxiliary transformer is 630kVA, and the voltage ratio is 33/0.4kV, then it will be fed from 33kV side (tertiary winding) of 220/132/33 kV auto transformer bank, we don't know why the electrical layout drawing shows that there are 2x400kVA 11/0.433kV in this substation.</p>	Please refer reply at S.No 3 .
179.	<p>Volume II "01 -00 Section Project Nepal.pdf" 2.2 The detailed scope of work</p>	<p>(q) Telecommunication equipments as per BPS According to the bidding document, we understand that the optical fiber communication system will be provided to each 220kV line, it will be used for teleprotection. Would you please tell us which kind of telecommunication (e.g. Data and Voice communication up to LDC) will be adopted for this project (optical fiber communication system or new-built PLCC system)?</p>	Bidder is to quote as per provision of bidding documents.
180.	<p>Volume II "01 -00 Section Project Nepal.pdf" 2.2 The detailed scope of work</p>	<p>The existing 132, 33 &amp; 11 kV Substation Matatirtha (Kathmandu) is conventional type (Without substation automation). All the control activities for existing substation is to be done from the new 220 kV Control room. For the same, Substation automation for existing 132 kV, 33 &amp; 11kV bays including necessary BCU, hardware, software and their integration is under present scope of work. Further, the automation system for 132 kV bays shall have provision for future integration of one number protection IEDs per feeder bays. What is "conventional type", please explain it. Please tell us the situation of control and protection in the existing substation, and the actual purpose of the renovation in the existing 132, 33&amp;11kV substation. Best able to provide drawings of the existing substation.</p>	Please refer reply at S.No. 57. Bidder is to quote as per provision of bidding documents.





		According to our understanding, we utilize the existing protection equipment of existing 132,33&11kV system, provide new BCU for 132,33&11kV in the new 220kV control room, and collect control and protection signals by I/O panel to connect to the new SAS(substation automation system) to achieve substation automation. Please confirm.	
181.	Volume II “05-00 Battery and Battery Charger.pdf” 1.3 Battery Charger	The rectifier assembly shall be fully/half controlled bridge type For battery charger(rectifier), can we use the high frequency switch type instead of thyristor controlled charger ? Based on our practice in engineering, high frequency switch type is more advance and popular than thyristor controlled type. Please confirm.	Bidder is to quote as per provision of bidding documents.
182.	Volume II CHAPTER 1- 2.2.2.1.2-g	Complete Fire protection system. Hydrant & HVW Spray System We understand that this is related to total substation fire protection system & not NIFPS system for transformer hence both are not in ABB scope of supply. However ABB will provide suitable valves for NIFPS arrangement. Please accept.	Bidder is to quote as per provision of bidding documents.
183.	Volume II CHAPTER-20 2.11	Dynamic Short Circuit Test requirement Please note that we had successfully conducted Dynamic Short circuit test on 105MVA 400/220/33kV Single Phase Auto Transformer, the certificate of which are attached. However we would like to inform you that this transformer is not fully comparable with the required transformer as per the conditions mentioned in IEC60076-5. Hence we request you to accept the SC calculations as per IEC60076-5 for this transformer without comparing with the SC tested transformer during design review. Kindly please accept.	Please refer reply at S.No. 94.
184.	Volume II CHAPTER-20 3.1.5.8.1	Any special cable required for shielding purpose for connection. Please note, M/S ABB will provide special cables for connection between transformer to marshalling box only. If any special cables require as per specification shall not be in ABB scope of supply due to unavailability of distance. The same shall be supply during detail engineering after getting clear distance between devices.	Bidder is to quote as per provision of bidding documents.
185.	Volume II CHAPTER-20 3.5.1	Terminal Arrangements & Bushing Offer transformer Terminal arrangement & Bushings are as follows. 1) HV - Bare Bushing with Oil to Air OIP Condenser Bushing.	Bidder is to quote as per provision of bidding documents.



	6.1	2) IV - Bare Bushing with Oil to Air OIP Condenser Bushing. 3) LV - Bare Bushing with Solid Porcelain Bushing 4) Neutral - Bare Bushing with Solid Porcelain Bushing. Please accept.	
186.	Volume II CHAPTER-20 3.6.2, 6.1	Cooling Equipment Control (ONAN/ Bidder is to quote as per provision of bidding documents. COOLING), ONAN/ONAF/(OFAF or ODAF) : 60% / 80%/100% OR ONAN/ONAF1/ONAF2 Cooling in both clauses are contradictory hence considering advantages of ONAN/ONAF1/ONAF2 with respect to ONAN/ONAF/(OFAF or ODAF) M/S ABB will offer the transformer with ONAN/ONAF1/ONAF2 cooling system. Kindly accept the same.	Please refer reply at S.No 154.
187.	Volume II CHAPTER-20 6.1-viii	Max Partial discharge level at Um Value of partial discharge level shall be as per IEC 60076. Please accept.	Please refer reply at S.No 96.
188.	Volume II CHAPTER-20 6.1- note	For parallel operation with existing transformer, the impedance, OLTC connection & range and the winding configuration (if necessary) is to be matched. Offer Transformer shall be suitable for parallel operation with similar transformer parameters only to meet parallel operation criteria.	Bidder is to quote as per provision of bidding documents. It may be noted on these substations 220/132 kV Transformer does not exist in existing substation.
189.	Volume II CHAPTER-20 8	Oil Storage Tank - Minimum Capacity : As mentioned in BPS Capacity of storage tank is not specify in ANEXURE-I Auto Transformer .Please furnish.Aslo please note that we are following the "ANEXURE-I Auto Transformer" as BPS. Please confirm.	Please refer reply at S.No. 37.
190.	Volume II Loss Capitalization	The power transformer shall be evaluated for the cost of losses based on the relation given below:Transformer loss Value of No Load Loss = US\$ 4684 per KW, Value of Load Loss = US\$ 1180 per KW Loss associated with cooling fan load: US\$ 393 per kW We assume that we need to follow the same value of capitalization for Auto transformer design also. Please confirm.	No such clause exist in Volume-II. For loss capitalization of transformer, Please Refer reply at S.No. 157
191.	Volume II Vender List	We haven't found any Project Specific Venderlist for your side. Request you to share the same ,if any list we have to offer.	Bidder is to quote as per provision of bidding documents.





		In case of non-receipt of Vender-list from your side , we will follow PGCIL 220 KV Transformer venderlist. Pls confirm	
192.	General	Any change in parameters will need to modify design w.r.t existing transformer parameters & it will cause to price implication. For your information.	Bidder is to quote as per provision of bidding documents.
193.	ITB 18.1	<p>Unless otherwise specified in the BDS and/or Section 6 (Employer's Requirements), bidders shall quote for the entire plant and services on a "single responsibility" basis such that the total bid price covers all the Contractor's obligations mentioned in or to be reasonably inferred from the bidding document in respect of the design, manufacture, including procurement and subcontracting (if any), delivery, construction, installation and completion of the plant. This includes all requirements under the Contractor's responsibilities for testing, pre-commissioning and commissioning of the plant and, where so required by the bidding document, the acquisition of all permits, approvals and licenses, etc.; the operation, maintenance and training services and such other items and services as may be specified in the Bidding Document, all in accordance with the requirements of the General Conditions. Items against which no price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed to be covered by the prices for other items.</p> <p>Bidders to quote for the entire Plant &amp; Services, please confirm whether the Employer will place separate orders for Offshore Supply ; Onshore Supply; Civil and Erection Work with corresponding value in both Local and Foreign currency, as the case may be.</p>	The Bidders are required to quote for entire plant and services as per Schedules in Vol.- III. '
194.	SCC 14(c) Sec 8 of 5	<p>Taxes &amp; Duties: Equipment, plant, materials and supplies, imported by the Contractor for execution of the Works, shall be subject to payment of customs duty at a special rate of one percent (1%) of CIP or Customs entry point value. This customs duty shall be paid by the Contractor at the time of import and will be reimbursed by the Employer to the Contractor upon submission of the original receipt issued by the Customs Department.</p> <p>As per our understanding 1% Customs Duty is payable by Importer</p>	Yes, the understanding is correct.



		in The Kingdom of Nepal. As ABB India Limited is an Exporter in The Kingdom of Nepal, hence payment of 1% Customs Duty to be paid by the importer. We understand that the contractor is responsible for initial deposition on behalf of the Employer and the Employer shall reimburse the same to the Contractor. Please confirm whether our understanding is correct.	
195.	SCC 14(g) Sec 8 of 5	Income tax assessed in accordance with the prevailing Income Tax Act of Nepal and as per the provision of any specific Double Taxation Agreement, shall be imposed on the Contractor, its sub-contractors and nominated sub-contractors. An advance income tax as per the prevailing income Tax Act and Finance Act shall be deducted from the monthly progress payment of the Contractor. As per the tender documents, Advance Income Tax is deductible on all payments to Contractors, including payments for off-shore supplies. As per Article 7 of the Double Tax Agreement between India and Nepal, Profit attributable to Permanent Establishment in The Kingdom of Nepal is only subject to Income Tax in Nepal. Thus, business income to Indian party, which is not attributable to the Permanent Establishment in Nepal is not taxable in Nepal. WHT is applicable only for the income which is taxable in Nepal. Please confirm that the WHT will not be deducted from payments for off-shore supplies.	Please follow the clause (j) of SCC 14. Information on tax obligation in Nepal can be found at the website of Inland Revenue Department of Government of Nepal. <a href="http://www.ird.gov.np">http://www.ird.gov.np</a>
196.	Chapter 1 - Project Specification Requirement (PSR) 2.2.1, (A) (i) (d)	Further for cable portion of Matatirtha –Trishuli Hydro station Double circuit lines, existing differential protection of cable portion to be utilized. Please note that as per tender price schedule, two nos. new line differential relays for remote end bays at Trishuli Hydro Station needs to be supplied. Whereas specification calls for existing differential protection of cable portion to be utilized. Please clarify.	Please refer reply at S.No. 81
197.	Chapter 1 - Project Specification Requirement (PSR) 2.2.1, (A) (i) (d)	Busbar Protection: For the 220kV System, Main and Check zone bus bar protection scheme with static type high impedance differential relay shall be provided. We recommend that Numerical type IEC61850 compliant high impedance differential relay shall be provided for integration with proposed substation automation system. Request you to amend the specification clause accordingly.	Bidder is to quote as per provision of bidding documents. For Busbar, Numerical type IEC61850 compliance relays meeting requirement of Chapter Control relay & protection panel will be accepted.



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198.	Chapter 1 - Project Specification Requirement (PSR) 2.2.1, (A) (i) (d)	For 132 kV system, existing bus bar protection of M/s GE USA Make, (Model: GE-B30 Bus differential relay). Integration of Bus Bar by modification in necessary AC/DC wiring/cabling etc, providing auxiliary and /or Trip relays for 132 kV bays is in the present scope. Please clarify whether existing GE-B30 bus differential relay is having sufficient analog channel for integration of present 1 x 132kV bay.	Please refer clause 11.1 of Chapter PSR, Technical Specification, The Bidders are advised to visit Sub-stations site and acquaint themselves with existing facilities, the topography, infrastructure, etc.
199.	Chapter 1 - Project Specification Requirement (PSR) 2.2.1, (A) (i) (d)	For 132 kV system, existing bus bar protection of M/s GE USA Make, (Model: GE-B30 Bus differential relay). Integration of Bus Bar by modification in necessary AC/DC wiring/cabling etc, providing auxiliary and /or Trip relays for 132 kV bays is in the present scope. Please clarify whether existing GE-B30 bus differential relay supports communication over IEC61850 for integration with proposed Substation Automation System. If not, we recommend that new numerical IEC61805 compliant low impedance centralized bus bar protection to be considered in the present scope for seamless integration with proposed substation automation system. Please review and confirm.	Please refer clause 11.1 of Chapter PSR, Technical Specification, The Bidders are advised to visit Sub-stations site and acquaint themselves with existing facilities, the topography, infrastructure, etc.
200.	Chapter 1 - Project Specification Requirement (PSR) 2.2.1, (A) (i) (d)	The existing 132, 33 & 11 kV Substation Matatirtha (Kathmandu) is conventional type (Without substation automation). All the control activities for existing substation is to be done from the new 220 kV Control room. For the same, Substation automation for existing 132 kV, 33 & 11kV bays including necessary BCU, hardware, software and their integration is under present scope of work. We understand from the specification that existing 132, 33 & 11kV is conventional type (without substation automation) and are not SCADA compatible. In order to make it SCADA compatible and also to reduce the substation shutdown time, we recommend that new control & protection panels (pre-wired and tested from Factory) for existing 132kV and 33kV bays with BCU and BPU's on IEC61850 to be supplied for seamless integration with proposed substation automation system. Request you to provide separate line items in tender price schedule for offering control & relay panels for existing bays.	Bidder is to quote as per provision of bidding documents.



201.	Chapter 1 - Project Specification Requirement (PSR) 2.2.1, (A) (i) (d)	<p>The existing 132, 33 &amp; 11 kV Substation Matatirtha (Kathmandu) is conventional type (Without substation automation). All the control activities for existing substation is to be done from the new 220 kV Control room. For the same, Substation automation for existing 132 kV, 33 &amp; 11kV bays including necessary BCU, hardware, software and their integration is under present scope of work.</p> <p>For 11kV Switchgear bays, we understand that existing protection relays to be replaced with new Bay Control cum Protection IED (BCPU) on IEC61850 for each bay for integration with proposed substation automation system. Please confirm whether our understanding is correct or not.</p>	<p>Bidder is to quote as per provision of bidding documents.</p> <p>3-Phase Over current &amp; Earth fault protection functionality shall be provided in BCU.</p>
202.	Chapter 1 - Project Specification Requirement (PSR) 2.2.1, (A) (i) (d)	<p>Further, the automation system for 132 kV bays shall have provision for future integration of one number protection IEDs per feeder bays.</p> <p>We understand existing relays of 132kV bays to be replaced with new numerical IEC61850 protection relays for integration with proposed SAS. Hence there is no need for any provision of future integration of IEDs.</p>	Bidder is to quote as per provision of bidding documents.
203.	Chapter 1 - Project Specification Requirement (PSR) 2.2.2.1.2, (d)	<p>Bus Bar Protection: For the 220kV kV System, Main and Check zone bus bar protection scheme with static type high impedance differential relay shall be provided.</p> <p>We recommend that Numerical type IEC61850 compliant high impedance differential relay shall be provided for integration with proposed substation automation system. Request you to amend the specification clause accordingly.</p>	Please refer reply at S.No 197.
204.	Chapter 1 - Project Specification Requirement (PSR) 2.2.2.1.2, (e)	<p>The existing 132 kV Substation at Marsyangdi (Markichowk) is conventional type (Without substation automation). All the control activities for existing substation is to be done from the new 220 kV Control room. For the same, Substation automation for existing 132 kV, 33kV bays including necessary BCU, hardware, software and their integration is under present scope of work.</p> <p>We understand from the specification that existing 132 &amp; 33kV is conventional type (without substation automation) and are not SCADA compatible. In order to make it SCADA compatible and also to reduce the substation shutdown time, we recommend that new control &amp; protection panels (pre-wired and tested from</p>	Bidder is to quote as per provision of bidding documents.





		Factory) for existing 132kV and 33kV bays with BCUs and BPU's on IEC61850 to be supplied for seamless integration with proposed substation automation system. Request you to provide separate line items in tender price schedule for offering control & relay panels for existing bays.	
205.	Chapter 1 - Project Specification Requirement (PSR) 2.2.2.1.2, (e)	Further, the automation system for 132 kV bays shall have provision for future integration of one number protection IEDs per feeder bays. We understand existing relays of 132kV bays to be replaced with new numerical IEC61850 protection relays for integration with proposed SAS. Hence there is no need for any provision of future integration of IEDs.	Bidder is to quote as per provision of bidding documents.
206.	Chapter 1 - Project Specification Requirement (PSR) 11.16	One number each Energy meter for the record and revenue purpose is to be provided for each 220/132kV bays (transfer & Bus coupler bays to be excluded) at Matatirtha substation and 220/132kV bays (Bus coupler bays to be excluded) at Marsyangdi Substation under present scope of contract, meeting the requirement as specified at Annexure – VI. We understand that for the new control & relay panels for existing 220/132kV bays, existing energy meters can be utilized. Please confirm.	Bidder is to quote as per provision of bidding documents.
207.	Chapter 15 - Control and Relay Panels 2.1	Control and Relay Board shall be of panels of simplex or duplex type design as indicated in bill of quantity. We understand that simplex type panels to be offered in the present scope. Please confirm.	Your understanding is generally in order.
208.	Chapter 15 - Control and Relay Panels 7.1	Coloured mimic diagram and symbols showing the exact representation of the system shall be provided in the front of control panels. We understand that this clause of the specification is not applicable since there is no need for conventional control panels in the present scope. Mimic diagram will be part of Bay control unit local HMI as mentioned in other parts of the specification. Please confirm.	Your understanding is generally in order.
209.	Chapter 15 - Control and Relay Panels 11	Indicating Instruments and Transducers for Control Panel. We understand that this clause of the specification is not applicable since there is no need for conventional control panels in the present	Your understanding is generally in order.



		scope. Discrete indicating meters and transducers are not required since measurement will be part of Bay control unit as mentioned in other parts of the specification. Please confirm.	
210.	Chapter 15 - Control and Relay Panels 12	ANNUNCIATION SYSTEM for Control Panel We understand that this clause of the specification is not applicable since there is no need for conventional control panels in the present scope. Alarm Annunciation are not required since same will be part of Bay control units and Bay protection units as mentioned in other parts of the specification. Please confirm.	Your understanding is generally in order.
211.	Chapter 15 - Control and Relay Panels 13	SWITCHES We understand that this clause of the specification is not applicable since there is no need for conventional control panels in the present scope. control / selector switches are not required since control will be part of Bay control unit local HMI as mentioned in other parts of the specification. Please confirm.	Your understanding is generally in order.
212.	Chapter 15 - Control and Relay Panels 14 & 15	INDICATING LAMPS and POSITION INDICATORS (if Applicable) We understand that this clause of the specification is not applicable since there is no need for conventional control panels in the present scope. Indicating lamps and position indicators are not required since indication will be part of Bay control unit local HMI as mentioned in other parts of the specification. Please confirm.	Your understanding is generally in order.
213.	Chapter 15 - Control and Relay Panels 18.8	For 220KV Main-I: Numerical distance protection scheme Main-II: Numerical distance protection scheme of a make different from that of Main –I Since the requirement is for Main 1 Distance and Main 2 Differential protection as mentioned in Chapter 1 - Project Specification Requirement (PSR), We understand that both Main 1 and Main 2 from same make will be acceptable. Please confirm.	Your understanding is generally in order.
214.	Chapter 15 - Control and Relay Panels 19.2	Local Breaker Backup Protection (k) be similar relays for complete scope of work as per specification Please note that for 220kV & 132kV stand-alone LBB is required, whereas for 33kV it is acceptable as in-built function of BCU as	Yes, For 33 kV, LBB as in-built function of BCU is acceptable.





		mentioned in the specification. Hence this clause will not be applicable for 33kV bays. Please confirm.	
215.	Chapter 15 - Control and Relay Panels 21.h	h) Neutral Current Relay for Single Phase Transformer Bank Please clarify whether Neutral current relay for single phase transformer bank as in-built function of BCU or any other protection relays will be acceptable.	As per Chapter 15 - Control and Relay Panels, the various protections as built-in function of Group I/II protections shall be accepted only if the functional requirements of corresponding protections as specified in clause no. 21.1 to 21.6 are met otherwise separate protection relay(s) shall be offered.
216.	Chapter 15 - Control and Relay Panels 33	CONTROL PANEL We understand that this clause of specification is not applicable as there is no need for conventional control panels as per tender price schedule as well as Substation Automation System specification. Please confirm.	Your understanding is generally in order.
217.	Chapter 15 - Control and Relay Panels 33	33 KV LINE CONTROL & PROTECTION PANEL ( For Substation with Automation) 2 Numerical Non Directional Over Current and Earth Fault Relay 1No.with High Set Feature and in built LBB protection We understand Numerical Non directional over current and earth fault protection as in-built function of bay control unit will be acceptable. Please confirm.	33 kV lines are not envisaged in present scope of work.
218.	Chapter 17 - Substation Automation System 4.1.5	The bidder shall provide the redundant switched optical Ethernet communication infrastructure for SAS. One switch shall be provided to connect all IEDs for two bays of 220kV yard to communication infrastructure. Each switch shall have at least two spare ports for connecting bay level IEDs and one spare port for connecting station bus. Please confirm the guidelines for estimating the number of bay level ethernet switches for 132kV bays, 33kV bays and 11kV bays.	One switch shall be provided to connect all IEDs for three bays of 132kV yard. In case of 33kV, for all 33kV bays, minimum two switches to be provided. Similarly for all 11kV bays, minimum two switches to be provided. Each switch shall spare ports as mentioned in specification. Further above requirement is minimum. In case, if more switches are required to complete the requirement of schematic, same is to be included in present scope of work.
219.	Price Schedule X.VIII. i) and (K)	COMMON SPARES Bay unit module Please note that as per Chapter 1 - Project Specification	Bidder may indicated "Not applicable".



		Requirement (PSR), High impedance bus bar protection needs to be offered. Hence bay unit modules are not applicable. We request you to delete the same from spares list.	
220.	Annexure VI Specification of Revenue Meter & Metering (Instrument) Transformer	Accuracy Class: 0.1 We understand that accuracy class of CT/PT for metering core is 0.2 class. Please clarify the requirement of 0.1 class energy meter.	Bidder is to quote as per provision of bidding documents.
221.	Volume - II, Chapter-I 2.1.1 i)	220 kV line bays: 4(Four) numbers of line bays for termination of (a) 2(Two) number of lines i.e. Marsyangdi (Marki Chowk) Kathmandu 220kV Double circuit line and (b) 2(two) number of lines i.e. Upper Trishuli 3 A, Hydro-project 220kV double circuit lines. It is our understanding that both 220kV Double Circuit lines shall be terminated via 220kV Power Cable. Please confirm that the supply of this cable and its termination kit do not lie in present scope.	Confirmed.
222.	Volume - II, Chapter-I 2.1.1 i)	220 kV Upper Trishuli 3A Hydro-project double circuit lines are charged at 132 kV voltage levels and terminated at existing 132 kV substation. These line are to be terminated in 220 kV switchyard in above mentioned 220 kV line bays, on construction of 220 kV bays. It is our understanding that existing 132kV equipments shall be utilized and no new 132kV equipments are envisaged under our scope. Please clarify.	132 kV bays are existing and bay equipment's are existing. Bidder is to quote as per BPS.
223.	Volume - II, Chapter-I 2.1.1 a)	7 (Seven) numbers of 55.33MVA, 220/132/33kV, 1-phase auto- transformers. 132 kV, XLPE insulated EHV cable, single core, Copper conductor cable of suitable rating Please specify a min cross section of 132kV EHV Cable to ensure fair participation.	Transformer rating is already indicated. Minimum Cross section of Cable is to be decided during detail engineering based on requirement of transformer rating.
224.	Volume - II, Chapter-I 2.1.1 b)	(b) 2 (two) number 630KVA, 33/0.400kV LT transformer along with associated equipment LT transformers shall be fed from the tertiary of the 2 220/132/33kV Transformer banks . Please confirm the same.	Please refer reply at S.No 3 & 5 .
225.	Volume - II, Chapter-I 2.1.1 d)	For the 220kV System, Main and Check zone bus bar protection scheme with static type high impedance differential relay shall be	Numerical Bus bar protection relay are acceptable.



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		provided. Please specify whether Centralized or Decentralized Busbar protection system is to be offered. Please confirm that numerical bus bar protection are also acceptable instead of static type.	
226.	Volume - II, Chapter-I 2.1.1 e)	S.No. Description At Matatirha 1. 220 KV Bays 7 It should be 8 No of bays please make the appropriate correction.	Your understanding is correct. Its 8 No of Bays. Bidder is to quote as per BPS.
227.	Volume - II, Chapter-I 2.1.1 g)	Complete Fire protection system. Hydrant & HVW Spray System shall be designed as per the technical specification meeting the present requirement and provisions for 220kV transformers in future. We assume that Hydrant system and HVW Spray system shall be provided only for the new 220kV switchyard side and 220/132kV Transformers lying under our scope.	Your understanding is generally in order for HVW spray system, However Hydrant system to be provided as per specification requirement for scope covered under subject package.
228.	Volume - II, Chapter-I 2.1.1 m)	Lattice and pipe structures (galvanized): 220/132kV Towers, Beams and equipment support structure shall be provided as per design and drawings to be developed by the contractor. However supply of support structure for circuit breaker is under scope of CB manufacturer as per their design. For other equipments, the support structures shall be of pipe structures. Since Lattice type structures are acceptable for Towers & Beams. Please specify whether Lattice type structures are acceptable for equipment support structure as well.	Except CB, for other equipment, the Support structures shall be of pipe structures. Bidder is to quote as per provision of bidding documents.
229.	Volume - II, Chapter-I 2.1.1 o)	Complete lighting and illumination for the switchyard including street Lightning, Control Room cum administrative building, Switchyard Panel Room, Fire Fighting Pump house. It is our understanding that our scope for illumination works in the switchyard shall only be limited to the new 220kV switchyard, and not the existing 132kV Switchyard.	Switchyard illumination for present scope is to be covered.
230.	Volume - II, Chapter-I 2.1.1 p)	(p) Earthing and lightning protection system. We request to provide a value of soil resistivity value of both Matatirha & Marsyangdi existing substations for tendering purpose in order to ensure fair participation.	Please refer reply at S.No. 98.
231.	Volume - II, Chapter-I	(i) LT switchgear (AC/DC Distribution boards) .	Your understanding is generally in order.



	2.2.1 i) & 2.2.2.1.2 i)	LT Switchgear shall be designed only for the new 220kV switchyard & equipments and not for existing bays and equipments within the substation.	
232.	Volume - II, Chapter-1 11.1	The lighting fixtures for switchyard lighting shall be mounted on LMs wherever LMs are provided or else in the gantry structure. We propose Metal Halide( Sodium Vapour) fixtures for Switchyard & Street lighting purpose. Please confirm if the same is acceptable.	Bidder is to quote as per provision of bidding documents.
233.	Volume - II, Chapter-1 11.13	Transmission Line Side insulator String. We understand that 132kV Line are not in present scope, hence 132kV line side insulator string are not be considered. Please confirm.	Confirmed.
234.	Volume - II, Chapter-1 6.3	Station Transformer - 33/0.415kV, 630kVA HT supply arrangement. At Matatirtha S/s one Stn. Transformer shall be connected to tertiary of the 400/220/33kV Power Transformer, however for second no. station transformer 33kV Supply is scope not clear. Please confirm the 33kV supply by customer for second station transformer.	Please refer reply at S.No 3 & 5.
235.	Volume - II, Chapter-1 ' 2.2.1 / 2.2.2.1.2	Substation Automation System for existing 132kV, 33kV and 11kV System... Please provide the signal list (I/O List) to be considered for BCU for upgradation to SAS of existing convensional system. There shall not be any change required in the existing protection system.	Please refer Chapter 17. Applicable I/O to be considered. Bidder to quote as per requirement of bidding document.
236.	Volume - II, Chapter-1 ' 2.2.1 / 2.2.2.1.2	Substation Automation System for existing 132kV, 33kV and 11kV System... Please confirm the status of switchyard switchgear to be taken from the existing control & protection panel instead of field.	Your understanding is generally in order. Bidder to quote as per requirement of bidding document.
237.	Volume - II, Chapter-1 ' 2.2.1 / 2.2.2.1.2	Substation Automation System for existing 132kV, 33kV and 11kV System... Do we need to provide any SAS / CRP selection switch at existing CRP ? Can we use the contact multiplication relay for status of equipment for CRP and SAS.	Bidder to quote as per requirement of bidding document.
238.	Volume - II, Chapter-12 8.2.5 (Section Erection)	Grounding System The maximum size of each grid of grounding mat shall not exceed 4X4 meters. Does it mean that if earthing design proof for more	Confirmed



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		than 4x4m spacing then also earthing grid spacing shall be 4x4m using copper conductor of 160sqmm size. Please confirm our understanding.													
239.	Volume - III, Schedule – I I-A, Part-B, C	<p>Illumination System</p> <table><tr><td>f Township quarter (B-Type, 4 nos)</td><td>LS</td><td>1</td></tr><tr><td>g Township quarter (C-Type, 4 nos)</td><td>LS</td><td>1</td></tr><tr><td>h Security room</td><td>LS</td><td>1</td></tr><tr><td>i Car parkings</td><td>LS</td><td>1</td></tr></table> <p>For each of these line items we propose CFL type fixtures as the specifications do not specify the same. Please confirm if the same is acceptable else specify the type.</p>	f Township quarter (B-Type, 4 nos)	LS	1	g Township quarter (C-Type, 4 nos)	LS	1	h Security room	LS	1	i Car parkings	LS	1	The scope of work comprises township include of design, engineering, testing, supply, installation, testing and commis-sioning of 415 V, 400Amp, Main Township Distribution board/Energy meter Boards/Flat DBs etc (single line diagram C/ENGG/TS/STD/COMMON/01 enclosed for reference purpose along with these calrifications), Power and Control cables, various lighting fixtures complete with lamps, supports and accessories, ceiling fans complete with electronic regulators, exhaust fans for toilets and pantry & accessories, lighting panels, lighting poles complete with distribution boxes, galvanized rigid steel/PVC conduits, lighting wires, G.I. Earthwire, receptacles, tag block & telephone socket, bells, boxes for telephone/television & Air-conditioners points, switchboards, switches, junction boxes, pull out boxes complete with acces-sories as outlined in electrical drawings enclosed with tender documents for various type of quarters, parking, pump house, recreation centre and transit camp associated with township. Refer Township Drawing provided with Clarification No-I.
f Township quarter (B-Type, 4 nos)	LS	1													
g Township quarter (C-Type, 4 nos)	LS	1													
h Security room	LS	1													
i Car parkings	LS	1													
240.	Volume - III, Schedule – I I-B, Part-A, B2, 3.0	3.0 145 kV Current Transformer (1- Phase) a 800A, 31.5 kA with 120% extended rating As per "Chapter- 3 SWITCHGEAR INSTRUMENT TRANSFORMERS" TABLE IIB & IIC The Current ratios are different from those stated in the Price Schedule. Please Clarify	Please refer reply at S.No 109.												



782

		which ratios shall be provided for the 145kV CT's	
241.	C/ENGG/NEPAL/MATATHIRTH(KATMANDU)/LAYOUT/01	Please specify the location of 2 Nos. of LT transformer within the switchyard clearly to estimate the LT power cable.	Location of LT transformers shall be decided during detail engineering.
242.	C/ENGG/NEPAL/MATATHIRTH(KATMANDU)/LAYOUT/01	We assume the that at the location of new 220kV control room as shown in the Layout there are no existing structures and thus no demolition lies in our scope.	In location of new 220kV control room as shown in the Layout there are no existing structures which required demolition.
243.	C/ENGG/NEPAL/MATATHIRTH(KATMANDU)/LAYOUT/01	Please confirm that Single ACSR Moose Conductor shall be used for 220kV Line and 220kV Transformer Bay Jack Bus and Jumper Connection.	No, it will be twin moose.
244.	C/ENGG/NEPAL/MATATHIRTH(KATMANDU)/LAYOUT/01	Please confirm that Double Tension Insulator String Shall be used for 220kV Single ACSR Moose Conductor stringing or we can us single insulator string hardware ?	Please refer clause no 1.4.2 of chapter 12, SE, technical specification.
245.	C/ENGG/NEPAL/MATATHIRTH(KATMANDU)/LAYOUT/01	We understand that 220kV Outgoing line for Marsyangdi (Marki Chowk) shall be D/C Over Head Line. Please confirm	Please refer reply at S.No. 9 and clause 2.2.1(d), clause 11.22
246.	C/ENGG/NEPAL/Marsyandi (Markichowk)/SLD/01	Transformer 3-ph SLD, voltage level mentioned as 765kV, 400kV etc.. May be corrected.	It's a typographical error.
247.	C/ENGG/NEPAL/Marsyandi (Markichowk)/SLD/01	Transformer 3-ph SLD, Can we consider the 220kV Aux. Bus Arrangement same as Matatirth S/s AIS type (manual change) instead of GIS type (through isolator).	Bidder to quote as per requirement of bidding document.
248.	220kV, 132kV and 33kV Circuit Breakers	Please confirm the type of Circuit Breaker, Single Pole Operated or Three Pole Gang operated ?	36kV Circuit breakers (CBs) not envisaged under subject package. In 145kV & 245 kV CBs shall be electrically ganged CBs. 72.5 kV CBs will be mechanically Ganged.
249.	Volume I - Section 9 - Contract Forms b of payment Procedures of Appendix – 1	Foreign Currency payment shall be made through Letter of Credit (L/C). The charges for establishment of letter of credit within the territory of Nepal shall be borne by the Employer, and outside Nepal shall be borne by the Contractor. When will the L/C be established by Employer for the Foreign Currency	The L/C shall be established within 1 months from the date of Contract agreement. However, the Contractor shall immediately submit the necessary documents to the Employer for L/C opening.





250.	Volume I - Section 9 - Contract Forms Schedule 1 of Terms of payment Appendix – 1	Ten percent (10%) of the total CIP amount as an advance payment against receipt of invoice and an irrevocable advance payment security for the equivalent amount made out in favor of the Employer. Within how many days the Advance Payment will be released by Employer from the date of submission of Invoice for Advance Payment	The Advance Payment will be released within 15 days by Employer from the date of submission of Advance Payment Invoice and the Advance Payment Bank Guarantee by the Contractor.
251.	Vol I - Section 7 - General Conditions of Contract 23 - Test and Inspection	Whenever the Contractor is ready to carry out any such test and/or inspection, the Contractor shall give a reasonable advance notice of such test and/or inspection and of the place and time thereof to the Project Manager. The Contractor shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Employer and the Project Manager or their designated representatives to attend the test and/or inspection. Kindly advise the number of days of advance notice to be provided by Contractor for Inspection	30 days for Plants and Equipment of Vol.-III, Schedule -1 and 15 days for Schedule-2.
252.	Vol I - Section 7 - General Conditions of Contract 25.5 - Delayed Precommissioning and/or Guarantee Test	In the event that the period of suspension under above Sub-Clause 25.5.1 actually exceeds 180 days, the Employer and Contractor shall mutually agree to any additional compensation payable to the Contractor. Kindly request you to reduce the period of suspension as below:  In the event that the period of suspension under above Sub-Clause 25.5.1 actually exceeds 90 days, the Employer and Contractor shall mutually agree to any additional compensation payable to the Contractor.	This shall be as per bidding document.
253.	Vol I - Section 7 - General Conditions of Contract 27.8 - Defect Liability	If the Facilities or any part thereof cannot be used by reason of such defect and/or making good of such defect, the Defect Liability Period of the Facilities or such part, as the case may be, shall be extended by a period equal to the period during which the Facilities or such part cannot be used by the Employer because of any of the aforesaid reasons. We kindly request to include as below: If the Facilities or any part thereof cannot be used by reason of such defect and/or making good of such defect, the Defect Liability Period of the Facilities or such part, as the case may be, shall be	This shall be as per bidding document.



		extended by a period equal to the period during which the Facilities or such part cannot be used by the Employer because of any of the aforesaid reasons. However, in no event the aggregate extended defect liability period under this clause exceeds the 24 months from the date of commencement of Defect Liability Period.	
254.		General Please confirm if this Project requires any environmental permits to be obtained by Employer? If Yes, has it been obtained?	Yes
255.		General Please clarify the procedure and timeline for the release of cost compensation by Employer in the event of additional costs incurred by the Contractor pursuant to GCC Clause 10.8 (Employer's Responsibilities), Clause 20.3.5&11 (Approval/Review of Technical Documents by Project Manager), Clause 23.5 & 11 (Test and Inspection), Clause 29.2&3 (Patent Indemnity), Clause 25.5.2&3 (Delay in Precommissioning), Clause 35.1&2 (Unforeseen Conditions), Clause 36.1 (Change in Laws and Regulations), Clause 38.3 & 4 (War Risks), Clause 39.2.6 (Change in the Facilities), Clause 40.3 (Extension of Time for Completion), Clause 41.3 (Suspension) and Clause 42.1 (Termination)	Such cost shall be released within 45 days from approval of NEA management.
256.	Volume I - Section 9 - Contract Forms b of payment Procedures of Appendix - 1	Foreign Currency payment shall be made through Letter of Credit (L/C). The charges for establishment of letter of credit within the territory of Nepal shall be borne by the Employer, and outside Nepal shall be borne by the Contractor. When will the L/C be established by Employer for the Foreign Currency	Please Follow the Reply of S.N. 249.
257.	Volume I - Section 9 - Contract Forms Schedule 1 of Terms of payment Appendix - 1	Ten percent (10%) of the total CIP amount as an advance payment against receipt of invoice and an irrevocable advance payment security for the equivalent amount made out in favor of the Employer. Within how many days the Advance Payment will be released by Employer from the date of submission of Invoice for Advance Payment	Please Follow the Reply of S.N. 250.
258.	Vol I - Section 7 - General Conditions of	Whenever the Contractor is ready to carry out any such test and/or inspection, the Contractor shall give a reasonable advance notice of	Please Follow the Reply of S.N. 251.





	Contract 23 - Test and Inspection	such test and/or inspection and of the place and time thereof to the Project Manager. The Contractor shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Employer and the Project Manager or their designated representatives to attend the test and/or inspection. Kindly advise the number of days of advance notice to be provided by Contractor for Inspection	
259.	Vol I - Section 7 - General Conditions of Contract 25.5 - Delayed Precommissioning and/or Guarantee Test	In the event that the period of suspension under above Sub-Clause 25.5.1 actually exceeds 180 days, the Employer and Contractor shall mutually agree to any additional compensation payable to the Contractor. Kindly request you to reduce the period of suspension as below:  In the event that the period of suspension under above Sub-Clause 25.5.1 actually exceeds 90 days, the Employer and Contractor shall mutually agree to any additional compensation payable to the Contractor.	This shall be as per bidding document.
260.	Vol I - Section 7 - General Conditions of Contract 27.8 - Defect Liability	If the Facilities or any part thereof cannot be used by reason of such defect and/or making good of such defect, the Defect Liability Period of the Facilities or such part, as the case may be, shall be extended by a period equal to the period during which the Facilities or such part cannot be used by the Employer because of any of the aforesaid reasons. We kindly request to include as below:  If the Facilities or any part thereof cannot be used by reason of such defect and/or making good of such defect, the Defect Liability Period of the Facilities or such part, as the case may be, shall be extended by a period equal to the period during which the Facilities or such part cannot be used by the Employer because of any of the aforesaid reasons. However, in no event the aggregate extended defect liability period under this clause exceeds the 24 months from the date of commencement of Defect Liability Period.	This shall be as per bidding document.
261.	General	Please confirm if this Project requires any environmental permits to be obtained by Employer? If Yes, has it been obtained?	Yes



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262.	General	Please clarify the procedure and timeline for the release of cost compensation by Employer in the event of additional costs incurred by the Contractor pursuant to GCC Clause 10.8 (Employer's Responsibilities), Clause 20.3.5&11 (Approval/Review of Technical Documents by Project Manager), Clause 23.5 & 11 (Test and Inspection), Clause 29.2&3 (Patent Indemnity), Clause 25.5.2&3 (Delay in Precommissioning), Clause 35.1&2 (Unforeseen Conditions), Clause 36.1 (Change in Laws and Regulations), Clause 38.3 & 4 (War Risks), Clause 39.2.6 (Change in the Facilities), Clause 40.3 (Extension of Time for Completion), Clause 41.3 (Suspension) and Clause 42.1 (Termination)	Please follow the NEA response to S.N.255.
263.	Volume 1 Section 3, Cl 2.5 (1)	Sub Contractor Power Transformers: Must have successfully carried out the dynamic short circuit test report on any rating of 220 kV and 132 kV or higher voltage class transformer and submit the test report.  Please note that single phase transformers are not normally used and are used only specific purpose where there are transportation issues, Hence we request you to accept Dynamic short circuit test of 160MVA 220/132kV and above rating (Voltage and MVA) three phase transformers also.	Please refer reply at S.No. 94.
264.	Volume 3 Schedule 1, B	420kV GIS Hope this is a typographical error and the same should be 220kV GIS.	Please refer reply at S.No. 7.
265.	Volume 3 Schedule 1, B1, 1,10 (i)	Partial Discharge Monitoring System for 245kV GIS Please note that the offered partial discharge equipment shall be online portable type. Please confirm our acceptance.	Bidder is to quote as per provision of bidding documents.
266.	Volume 3 Schedule 1, II, B,C,D & E	Spares for 245kV SF6 Circuit Breaker, Isolator, CT & VT Please note ABB as a manufacturer does not recommend spares for 245kV GIS SF6 Circuit Breaker, Isolator, CT and VT as all these equipment spares cannot be changed in site and it needs experts to carry out the repackaging in a closed environment.	Bidder is to quote as per provision of bidding documents.
267.	Volume 3 Schedule No 4 e	Type test Charges for Type Test Conducted in Abroad The test mentioned can be carried out at manufacturer's works,	The tests carried out at manufacturer's works are also acceptable subject to meeting



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		Hence type test will not be conducted in External laboratory. Kindly conform our understanding.	technical specification requirement.
268.	Volume 2 Section Project , Annexure III	Main Protection Relays, Control & protection Panels and Sub Station Automation System We kindly request to you to accept Schneider relays, Control & Relay panel and Sub Station Automation system.	Bidder is to quote as per provision of bidding documents.
269.	Volume 2 Section Project , Annexure I	Drawings for Quarters Request you to furnish a copy of staff quarters drawings as the same is missing in bid.	Design is in bidder's scope. These drawings are to be developed by successful bidder based on provision of bidding documents.
270.	Volume 2 Section Project, Chapter 1, Cl 11.8	Training at Manufacturers work: The Contractor shall include in the training charges (i) Accommodation charges (ii) payment of per Diem allowance to NEA trainees @ USD 150 per day per trainee for the duration of training abroad towards meals and other incidental expenses and (iii) to and fro economy class air ticket from Nepal to place of training. The duration of training shall be excluding travelling period. We request you to delete per diem allowance of 150USD / day Since we are taking care of To & Fro Air Fare. No other incidental expenses shall be covered by us. Please confirm.	Bidder is to quote as per provision of bidding documents.
271.	Volume 2 Section Project, Chapter 1, Cl 12	Trial Run: Operation of the Facilities or any part thereof by the Contractor immediately after the Commissioning for a continuous period of 72 (Seventy two) hours continuously. In case of interruption due to problem / failure in the respective equipment, the contractor shall rectify the problem and after rectification, continuous 72 (Seventy two) hours period start after such rectification.  We propose to include the below clause. In case of any interruption due to problem / failure during trial run for reasons not attributable by contractor then the trial run shall have been deemed completed and the contractor shall have fulfilled its obligations with respect to the trial run.	Bidder is to quote as per provision of bidding documents.
272	Volume II Technical Specification, Chapter -	The scope of work shall include but shall not be limited to the following based on design and drawings to be developed by the	Design is in contractor's scope of work. Construction drawings to be prepared by



	I, Cl. 2.2.1, iii	contractor. Please note that, several drawings are already enclosed stating as "Tender/ Construction purposes". Kindly confirm again, whether such designs are in scope & if so, the drawings must be without any dimension & indicative only.	contractor and to be submitted to Employer for approval.
273.	Volume II Technical Specification, Chapter - 1, Cl. 2.2.1, iii	Scope covers " Control Room cum administrative Building". Please note that, scope includes control room building, for which, Price schedule stipulates double storied with an area of 750sqm. However, Tech. spec.chapter 14,Cl.13.2, the break up area provided is reasonably lower. Further, against the same cl. In Ch-14, it is stated as 25X20 m double storied. Kindly revise/reduce the area in BPS at the break-up provision in Chapter-14 seems to be reasonable along with the requirement of switch yard panel room & considering No. of bays. Also confirm whether the bidders can reasonably reduce the area of panel rooms, If feasible by design.	The area breakup in clause 13.2, Chapter-14 is for reference only. The area requirement shall be finalized during detailed Engineering stage. The area of Control room building in BPS is indicative only. However, actual area constructed shall be measured and paid in accordance of relevant code. Bidder is to quote as per BPS and TS.
274	Volume 2 Tech. Specification, Chapter - 1, Cl. 2.2.1.iii	Scope covers " Fire Fighting Pump House & Fire Water Tank" Please Note that, Scope includes Fire Water Tank, which is specified as Lumpsum in Price Sch. Drg. is provided in Tender Doc., which is too big, with respect to the Highest rated Trafo in scope. Please clarify whether, We can reduce the size as per actual requirement. Also clarify whether, You will allow reduction in Pump sizes / Pump Room sizes based on actual requirement.	The quantity of Fire fighting water tank is in Lump sum based on area indicated in tender drawing. The constructed area and payment shall be regulated on the basis of the area indicated in tender drawing. The requirement shall be finalized during detailed engineering stage. Bidder is to quote as per BPS and area mentioned in tender drawing. The quantity of pump room is on area basis which shall be regulated as per actual area constructed.
275	Volume 2 Tech. Specification, Chapter - 1, Cl. 2.2.1.iii	Scope does not stipulate on " external water supply system.  We find that external water supply system is included in BPS and a j Bore well is specified. Bore well is not under the scope of this contract. Please clarify whether the Bore well will be provided by You.	Bore well has not been envisaged in the BPS and TS.
276	Volume 2 Tech. Specification, Chapter -	Scope covers " Residential Quarters "-	Preparation of Design and drawing of residential quarters is in the scope of





	1, Cl. 2.2.1.iii	Scope & BPS Covers Residential Quarters. We request You to provide Line sketches with Room dimensions	contractor. Bidder is to quote as per BPS and technical specification.
277	Volume 2 Tech. Specification, Chapter - 14, Cl. 24.21	Scope covers " Bore Well"-  Bore Well is Not covered in BPS. Further, Bore Well may not be a feasible option for permanent Water Supply. Kindly confirm that. Bore well is not in scope & permanent water source shall be arranged by you.	Bore well has not been envisaged in the BPS and TS. Water supply at one point in sub station area shall be arranged by NEA for O&M of sub station. Construction water shall be arranged by the contractor at his own cost.
278	Volume 3	Technical Data Sheet - We could not find any technical data sheets to be filled for the offered equipments, Please let us know the requirements of data sheets whether it is to be submitted. If it is to be submitted please send us the technical data sheets to be filled in.	Bidders can submit their own technical data-sheet based on the Technical Specifications and requirements as per Bid document for the offered equipment.
279		For 220/132/33kV Marsyangdi(Marki Chowk) GIS substation that is situated near Prithvi Highway Road  Refer to both drawings (i) & (ii):- (i) Single Line Diagram of 220/132/33kV Marsyandi (Marki Chowk) Substation, Dated May 2015, (Drawing No.: C/ENGG/NEPAL/Marsyangdi(Markichowk)/SLD/01) (ii) Electrical Layout Plan of 220/132kV Marsyangdi (Markichowk), Dated Jan 2016, (Drawing No.: C/ENGG/NEPAL/Marsyandi(Markichowk)/LAYOUT/01)  220kV GIS arrangement in Electrical layout defers from single line diagram where ICT #1 is located between Line 2 & Line 3 and ICT #2 is located between Line 6 & Line 7.  In the Electrical Layout Plan, ICT #1 is placed between Line 4 & BC and ICT #2 is contained between Line 6 & Line 7. Please advise which arrangement that we should follow?	Final Line & ICT bays location in layout shall be decided during detail engineering considering proper current distribution in busbar considering current rating and other layout requirement and bus duct requirement etc.



280	As per chapter 21 GIS specification for Markichowk combined 6.2.12	The disconnectors and the safety grounding switches are separate modules in GIS design and shall have only electrical inter-locks between them. However the required padlocking facility shall be provided for the manual interlocking for additional protection.	Bidder is to quote as per requirements of bidding documents.
281	As per Volume III, schedule 2 page 13 of 25, B 1.1.09	According to the description of the 245kv GIS bus duct, we are not sure if length 250 and 950 the project need is for 1-phase or for 3-phase. And if you can't use such a length, how to deal this situation.	Please refer BPS. In BPS, 1-phase bust duct is mentioned in respective items.
282	As per chapter-1 Project Specification Requirements, 1.0	Please provide optical link distance in kms between 220kV Matatirtha S/S & Marsyangdi(Markichowk) S/S.	Approx. 85km.
283	As per chapter-1 Project Specification Requirements, 2.1.3	Please provide details of remote substations (Name, type of SDH/PDH) connected to Matatirtha S/S.	Matatirtha substation is connected with LDC Kathmandu. Further it will have FO connectivity with other substations inter-alia including Trishuli Hydro station and Marsyangdi(Markichowk) S/S
284	As per chapter-1 Project Specification Requirements, 2.1.3	Please provide details of remote substations (Name, type of SDH/PDH) connected to Marsyangdi(Markichowk) S/S.	FO connectivity of Marsyangdi (Markichowk) are with Bharatpur, Matatirth, Udipur substation etc.
285	As per Volume III, schedule 1 H(a)	Quantity not mentioned, please provide substation wise BOQ for DPTC (4 commands) for MAIN-1 and requirement of line differential channels on C37.94 for MAIN-2.	Total quantities of Digital protection coupler (DPC) is mentioned as 6 Nos. Substation wise breakup of above mentioned 6 No DPC is as below At Matatirth substation: 4 No. At Trishuli Hydro station: 2 Nos Also refer reply at S.No. 82.
286	As per Volume III, schedule 1 H(i)	Please provide BOQ for testing and maintenance equipment (print test kit only).	It is already indicated as Set 1.
287	As per Volume III, schedule 1 XVIII	Common spares,(i), Bay unit module, Please confirm if the bay unit module applicable to Telecommunication system.	It is for bus bar protection application, if applicable.
289	Regarding Matatirtha S/S	Please provide Civil layout drawing of 220kv Matatirtha Substation.	Layouts drawings is to be developed during detail engineering by contractor, as design is in scope of contactor.
290	Regarding Marsyangdi S/S	Please provide Civil layout drawing of 220kV Marsyangdi Substation.	Please refer reply at S.No 289.





291	Volume II-14-00 CIVIL WORKS 4.7 Disposal of Surplus Earth	The surplus earth generated from foundation work shall be disposed away from levelling area boundary at low lying areas within 2Km lead. The surplus earth if disposed within substation main boundary, the same shall be spread in uniform layers and compacted with suitable compacting equipment to achieve 95% compaction at O.M.C. There is no explicit location stated in the Bidding Document for the surplus earth, as well as the cost for transportation, loading and unloading, any hire of site. Please clarify.	The location for disposal of surplus earth generated from foundation works within 2 KM outside boundary wall shall be arranged by the contractor. The cost of disposal of surplus earth within specified lead including transportation, loading and unloading, any hire of site is deemed to be included in the quoted rate of relevant item of excavation of BPS.
292	Volume I ITB27.11 Bid Opening	The Employer shall prepare a record of the opening of Price Bids that shall include, as a minimum: the name of the Bidder, the Bid Price (per lot if applicable), any discounts, and alternative offers. What does the "discount" mean, and in what kind of special form in the Contract? Please clarify.	Discounts means discount offered by the Bidder on the offered Bid Prices on Vol-III . Please Refer to the Vol-I,Section-1, Instruction to Bidders (ITB), Clause No. 18.7 for this purpose.
293	Volume I Section-3 - 1.2.7 Domestic Preference	(d) In the comparison of Bids, only the CIF/CIP prices component of each Bid for the Plant and Equipment offered from outside the Employer's country shall be increased by fifteen percent (15%); If one of the Bidder's Plant and Equipment offered from outside the Employer's country, then its Price of Bid shall be increased fifteen percent (15%) by the Employer in the comparison of Bids? Please confirm.	For the evaluation purpose only if one or more bidders offer some of the items of the Plant and Equipment from the Employer's Country (NEPAL) in BPS "Schedule-2", then the CIF/CIP prices component of those items of the Plant and Equipment offered by other Bidders in BPS "Schedule-1" from outside the Employer's country shall be increased by fifteen percent (15%).
294	Site Investigation Substation in Matatirtha	Access road The access road to the Substation in Matatirtha is in bad status and seems not wide enough. If existing substation's access road is the same one during construction, please provide the maximum height and maximum wide size. Is it the only path way to the existing substation? We need to know if large-scale equipments (such as transformer) can be passed though properly. Please clarify.	Please refer clause 11.1 of Chapter PSR, Technical Specification, The Bidders are advised to visit Sub-stations site and acquaint themselves with existing facilities, the topography, infrastructure, etc.
295	Site Investigation Clearance	Time Part of the Plant, Equipment and Material shall arrive in India through marine, the Clearance shall be one time (if there is an access agreement between Nepal and India) or two times (if there is none). Please clarify.	The clearance shall be one time at Nepal border.



296	Site Investigation Geological Exploration	If there is a ready- made report of the Site? Please confirm.	Soil investigation is in scope of bidder.
297	Site Investigation Substation in Matairtha and Markichowk	Commission There is no formulation about the time and satisfied condition for commission in Bid Document. Please clarify.	Yes. The understanding is correct.
298	Volume I ITB21Bid Security/Bid Securing Declaration	Issuing party As mentioned in Volume I Section-8 13.3 Securities: Performance Security and Advance Payment Security shall be in the form of the Bank Guarantee issued as per the form included in Section 6 (Employer's Requirements, Bank Guarantee and Certificates). Bank Guarantee issued by a bank outside Nepal must be counter guaranteed by any registered bank in Nepal. Should bid security abide by above principles? Please clarify.	Bid Security is not required to be counter guaranteed by registered bank in Nepal
299	Volume I Section-4 Bid Security	(b) does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB"); or The "errors" here means calculation error according to ITB. Please confirm.	Please Refer to the Vol-I,Section-I, Instruction to Bidders (ITB), Clause No. 36 for this purpose.
300	Site Investigation	There is no the detail boundary line of land of two substations and the topographic map within boundary line in the Bidding Document? If any, please provide.	The detail boundary line of land of two substations shall be provided to successful bidder during detail engineering.
301	Volume II GPP	The size of two substations is not clear in the Bidding Document, existing facilities such as water, electric, road and fence do not mark properly. And there is no clear working interface between existing and extension facilities. Please clarify.	Please refer clause 11.1 of Chapter PSR, Technical Specification, The Bidders are advised to visit Sub-stations site and acquaint themselves with existing facilities, the topography, infrastructure, etc.
302	Volume II "01 -00 Section Project Nepal.pdf" 2.2.1 (A) New 220kV AIS type (Air Insulated Substation) and extension 132 kV AIS substation at Matatirtha (Kathmandu)	For 132 kV system, existing bus bar protection of M/s GE USA Make, (Model: GE-B30 Bus differential relay). Integration of Bus Bar by modification in necessary AC/DC wiring/cabling etc, providing auxiliary and /or Trip relays for 132 kV bays is in the present scope. In our understanding, the expansion of 132kV bay and relevant protection of Matatirtha substation is not in the scope of the contractor, we only need to send the signals of the existing bus bar protection to the new SAS by wiring/cabling, please confirm.	Required modifications in Bus bar protection after terminating 132 kV ICT bays in existing 132 kV bays which will be vacated after shifting of 220 kV lines (charged are charged at 132 kV Bays in existing substation) are also in present scope of work.





303	Volume II "01 -00 Section Project Nepal.pdf" 2.2.1 (A) New 220kV AIS type (Air Insulated Substation) and extension 132 kV AIS substation at Matatirtha (Kathmandu)	Further for cable portion of Matatirtha –Trishuli Hydro station Double circuit lines, existing differential protection of cable portion to be utilized. Dismantling, re-erection and all necessary modification are under present scope of work and same shall be part of line protection of Matatirtha –Trishuli Hydro station lines. In our understanding, the Matatirtha –Trishuli Hydro station Double circuit lines are new-built 220kV lines, relevant new 220kV line protection in Matatirtha substation will be in the scope of the contractor, so please explain "existing differential protection of cable portion to be utilized", and "Dismantling, re-erection and all necessary modification".	Please refer reply at S.No. 9 and S. No. 35.
304	Drawing Electrical Layout of plan of 220 /132 kV Matatirtha (Kathmandu)	Nala Shown in Drawing Some towers and equipment are nearby Nala shown in drawings, Please clarify Piling are required or not for these Towers and Equipment foundations.	Piling is not envisaged in the tender. However, in case pile is required as per soil report, the same shall be provided by the contractor in line with provision of contract.
305	Volume -III Sl. NO 11.1, (a), Schedule No. 4	Construction of Black top (Bituminious/Asphaltic) Road Please provide Standard drawing of Black top (Bituminious/Asphaltic) Road for reference purpose	Preparation of design and drawing of black top road is in the scope of contractor. Bidder is to quote as per BPS and TS.
306	Volume -III Sl. NO. IV OF 21, (a), Schedule No. 4	Township (Quarters) Please provide Standard drawing of B Type , C Type and D Type Quarters	Preparation of Design and drawing of quarters (B-Type, C-Type & D-type) is in the scope of contractor. Bidder is to quote as per BPS and TS.
307	Volume -III Sl. NO. 29, (a), Schedule No. 4	Construction of Retaining wall Please provide drawing of Retaining wall	Preparation of Design and drawing of retaining wall is in the scope of contractor. Bidder is to quote as per BPS and TS.
308.	Volume -III Sl. NO. i OF 22, (a), Schedule No. 4	Transit Camp Please provide Standard drawing of Transit Camp	Preparation of Design and drawing of transit camp is in the scope of contractor. Bidder is to quote as per BPS and TS.
309	Chapter 1 - Project Specification Requirement (PSR) 2.2.1, (A) (i) (d)	Further for cable portion of Matatirtha –Trishuli Hydro station Double circuit lines, existing differential protection of cable portion to be utilized. Please note that as per tender price schedule, two nos. new line differential relays for remote end bays at Trishuli Hydro Station needs to be supplied. Whereas specification calls for existing differential protection of cable portion to be utilized. Please clarify.	Please refer reply at S.No.9 .



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310	Chapter 1 - Project Specification Requirement (PSR) 2.2.1, (A) (i) (d)	For 132 kV system, existing bus bar protection of M/s GE USA Make, (Model: GE-B30 Bus differential relay). Integration of Bus Bar by modification in necessary AC/DC wiring/cabling etc, providing auxiliary and /or Trip relays for 132 kV bays is in the present scope. Please clarify whether existing GE-B30 bus differential relay is having sufficient analog channel for integration of present 1 x 132kV bay.	Please refer clause 11.1 of Chapter PSR, Technical Specification, The Bidders are advised to visit Sub-stations site and acquaint themselves with existing facilities, the topography, infrastructure, etc.
311	Chapter 1 - Project Specification Requirement (PSR) 2.2.1, (A) (i) (d)	For 132 kV systems, existing bus bar protection of M/s GE USA Make, (Model: GE-B30 Bus differential relay). Integration of Bus Bar by modification in necessary AC/DC wiring/cabling etc, providing auxiliary and /or Trip relays for 132 kV bays is in the present scope. Please clarify whether existing GE-B30 bus differential relay supports communication over IEC61850 for integration with proposed Substation Automation System.	Please refer clause 11.1 of Chapter PSR, Technical Specification, The Bidders are advised to visit Sub-stations site and acquaint themselves with existing facilities, the topography, infrastructure, etc.
312	Chapter 1 - Project Specification Requirement (PSR) 2.2.1, (A) (i) (d)	The existing 132, 33 & 11 kV Substation Matatirtha (Kathmandu) is conventional type (Without substation automation). All the control activities for existing substation is to be done from the new 220 kV Control room. For the same, Substation automation for existing 132 kV, 33 & 11kV bays including necessary BCU, hardware, software and their integration is under present scope of work. We understand from the specification that existing 132, 33 & 11kV is conventional type (without substation automation) and are not SCADA compatible. In order to make it SCADA compatible and also to reduce the substation shutdown time, we recommend that new control & protection panels (pre-wired and tested from Factory) for existing 132kV and 33kV bays with BCU and BPU on IEC61850 to be supplied for seamless integration with proposed substation automation system. Request you to provide separate line items in tender price schedule for offering control & relay panels for existing bays.	Please refer reply at S.No. 57. Bidder is to quote as per provision of bidding documents.
313	Chapter 1 - Project Specification Requirement (PSR) 2.2.1,	The existing 132, 33 & 11 kV Substation Matatirtha (Kathmandu) is conventional type (Without substation automation). All the control activities for existing substation is to be done from the new 220 kV	Please refer reply at S.No. 201.





	(A) (i) (d)	Control room. For the same, Substation automation for existing 132 kV, 33 & 11kV bays including necessary BCU, hardware, software and their integration is under present scope of work. For 11kV Switchgear bays, we understand that existing protection relays to be replaced with new Bay Control cum Protection IED (BCPU) on IEC61850 for each bay for integration with proposed substation automation system. Please confirm whether our understanding is correct or not.	
314	Chapter 1 - Project Specification Requirement (PSR) 2.2.1, (A) (i) (d)	Further, the automation system for 132 kV bays shall have provision for future integration of one number protection IEDs per feeder bays. We understand existing relays of 132kV bays to be replaced with new numerical IEC61850 protection relays for integration with proposed SAS. Hence there is no need for any provision of future integration of IEDs.	Please refer reply at S.No. 205 .
315	Chapter 1 - Project Specification Requirement (PSR) 2.2.2.1.2, (e)	The existing 132 kV Substation at Marsyangdi (Markichowk) is conventional type (Without substation automation). All the control activities for existing substation is to be done from the new 220 kV Control room. For the same, Substation automation for existing 132 kV, 33kV bays including necessary BCU, hardware, software and their integration is under present scope of work. We understand from the specification that existing 132 & 33kV is conventional type (without substation automation) and are not SCADA compatible. In order to make it SCADA compatible and also to reduce the substation shutdown time, we recommend that new control & protection panels (pre-wired and tested from Factory) for existing 132kV and 33kV bays with BCUs and BPUs on IEC61850 to be supplied for seamless integration with proposed substation automation system. Request you to provide separate line items in tender price schedule for offering control & relay panels for existing bays.	Please refer reply at S.No. 202 .
316	Chapter 1 - Project Specification Requirement (PSR) 2.2.2.1.2, (e)	Further, the automation system for 132 kV bays shall have provision for future integration of one number protection IEDs per feeder bays. We understand existing relays of 132kV bays to be replaced with new numerical IEC61850 protection relays for integration with	Please refer reply at S.No. 205 .



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		proposed SAS. Hence there is no need for any provision of future integration of IEDs.	
317	Chapter 1 - Project Specification Requirement (PSR) 11.16	<p>One number each Energy meter for the record and revenue purpose is to be provided for each 220/132kV bays (transfer &amp; Bus coupler bays to be excluded) at Matatirtha substation and 220/132kV bays (Bus coupler bays to be excluded) at Marsyangdi Substation under present scope of contract, meeting the requirement as specified at Annexure – VI.</p> <p>We understand that for the new control &amp; relay panels for existing 220/132kV bays, existing energy meters can be utilized. Please confirm.</p>	Please refer reply at S.No. 206 .
318	Chapter 15 - Control and Relay Panels 2.1	<p>Control and Relay Board shall be of panels of simplex or duplex type design as indicated in bill of quantity.</p> <p>We understand that simplex type panels to be offered in the present scope. Please confirm.</p>	Please refer reply at S.No. 207 .
319	Chapter 15 - Control and Relay Panels 7.1	<p>Coloured mimic diagram and symbols showing the exact representation of the system shall be provided in the front of control panels.</p> <p>We understand that this clause of the specification is not applicable since there is no need for conventional control panels in the present scope. Mimic diagram will be part of Bay control unit local HMI as mentioned in other parts of the specification. Please confirm.</p>	Please refer reply at S.No. 208 .
320	Chapter 15 - Control and Relay Panels 11	<p>Indicating Instruments and Transducers for Control Panel.</p> <p>We understand that this clause of the specification is not applicable since there is no need for conventional control panels in the present scope. Discrete indicating meters and transducers are not required since measurement will be part of Bay control unit as mentioned in other parts of the specification. Please confirm.</p>	Please refer reply at S.No. 209 .
321	Chapter 15 - Control and Relay Panels 12	<p>ANNUNCIATION SYSTEM for Control Panel</p> <p>We understand that this clause of the specification is not applicable since there is no need for conventional control panels in the present scope. Alarm Annunciation are not required since same will be part of Bay control units and Bay protection units as mentioned in other parts of the specification. Please confirm.</p>	Please refer reply at S.No. 210 .



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322	Chapter 15 - Control and Relay Panels 13	<p>SWITCHES</p> <p>We understand that this clause of the specification is not applicable since there is no need for conventional control panels in the present scope. control / selector switches are not required since control will be part of Bay control unit local HMI as mentioned in other parts of the specification. Please confirm.</p>	Please refer reply at S.No. 211 .
323	Chapter 15 - Control and Relay Panels 14 and 15	<p>INDICATING LAMPS and POSITION INDICATORS (if Applicable)</p> <p>We understand that this clause of the specification is not applicable since there is no need for conventional control panels in the present scope. Indicating lamps and position indicators are not required since indication will be part of Bay control unit local HMI as mentioned in other parts of the specification. Please confirm.</p>	Please refer reply at S.No. 212 .
324	Chapter 15 - Control and Relay Panels 18.8	<p>For 220KV</p> <p>Main-I: Numerical distance protection scheme</p> <p>Main-II: Numerical distance protection scheme of a make different from that of Main –I</p> <p>Since the requirement is for Main 1 Distance and Main 2 Differential protection as mentioned in Chapter 1 - Project Specification Requirement (PSR), We understand that both Main 1 and Main 2 from same make will be acceptable. Please confirm.</p>	Please refer reply at S.No. 213 .
325	Chapter 15 - Control and Relay Panels 19.2	<p>Local Breaker Backup Protection</p> <p>(j) be similar relays for complete scope of work as per specification. Please note that for 220kV &amp; 132kV stand-alone LBB is required, whereas for 33kV it is acceptable as in-built function of BCU as mentioned in the specification. Hence this clause will not be applicable for 33kV bays. Please confirm.</p>	Please refer reply at S.No. 214 .
326	Chapter 15 - Control and Relay Panels 21.h	<p>h) Neutral Current Relay for Single Phase Transformer Bank. Please clarify whether Neutral current relay for single phase transformer bank as in-built function of BCU or any other protection relays will be acceptable.</p>	Please refer reply at S.No. 215 .
327	Chapter 15 - Control and Relay Panels 33	<p>CONTROL PANEL</p> <p>We understand that this clause of specification is not applicable as there is no need for conventional control panels as per tender price schedule as well as Substation Automation System specification. Please confirm.</p>	Please refer reply at S.No. 216 .



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328	Chapter 15 - Control and Relay Panels 33	33 KV LINE CONTROL & PROTECTION PANEL ( For Substation with Automation) 2 Numerical Non Directional Over Current and Earth Fault Relay 1No.with High Set Feature and in built LBB protection We understand Numerical Non directional over current and earth fault protection as in-built function of bay control unit will be acceptable. Please confirm.	Please refer reply at S.No. 217 .
329	Chapter 17 - Substation Automation System 4.1.5	The bidder shall provide the redundant switched optical Ethernet communication infrastructure for SAS. One switch shall be provided to connect all IEDs for two bays of 220kV yard to communication infrastructure. Each switch shall have at least two spare ports for connecting bay level IEDs and one spare port for connecting station bus. Please confirm the guidelines for estimating the number of bay level Ethernet switches for 132kV bays, 33kV bays and 11kV bays.	Please refer reply at S.No. 218 .
330	Price Schedule -X.VIII. i) and (K)	COMMON SPARES Bay unit module Please note that as per Chapter 1 - Project Specification Requirement (PSR), High impedance bus bar protection needs to be offered. Hence bay unit modules are not applicable. We request you to delete the same from spares list.	Please may indicate "not applicable" , if it is not applicable for their design.
331	Annexure VI - Specification of Revenue Meter & Metering (Instrument) Transformer	Accuracy Class: 0.1 We understand that accuracy class of CT/PT for metering core is 0.2 class. Please clarify the requirement of 0.1 class energy meter.	Please refer reply at S.No. 220.
332		The quantity of station transformer and the quantity of the 33 kV equipment specified in the price schedule are not compatible. To be specific, there are 2 sets of station transformers, but only 1 no of isolator, 3 nos of lightning arrestors and 3 sets of fuses. Please check the quantity of the equipment mentioned above, and confirms their quantities	Please refer reply at S.No. 3 & 5.
333		The PLCC equipment is clearly mentioned in Technical Specification, Chapter 16, Volume II. But in price schedule, we do not find PLCC and its quantity. Pls clarify whether this tender include PLCC and related works.	Under the subject contract Digital Protection coupler are envisaged for tele-protection purpose. Bidder is to quote as per BPS.



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334		We haven't found the technical data sheet within the tender documents issued so far. Therefore we request you to issue the technical data sheet.	Please refer reply at S.No. 278.
335	Chapter 1 Project Specification Requirement (PSR) 2.2.1, (A) (i) (d)	Busbar Protection. For the 220kV System, Main and Check zone bus bar protection scheme with static type high impedance differential relay shall be provided. We recommend that Numerical type IEC61850 compliant high impedance differential relay shall be provided for integration with proposed substation automation system. Request you to amend the specification clause accordingly.	Please refer reply at S.No. 197 .
336	Chapter 1 Project Specification Requirement (PSR) 2.2.1, (A) (i) (d)	For 132 kV system, existing bus bar protection of M/s GE USA Make, (Model: GE-B30 Bus differential relay). Integration of Bus Bar by modification in necessary AC/DC wiring/cabling etc, providing auxiliary and /or Trip relays for 132 kV bays is in the present scope. Please clarify whether existing GE-B30 bus differential relay supports communication over IEC61850 for integration with proposed Substation Automation System. If not, we recommend that new numerical IEC61805 compliant low impedance centralized bus bar protection to be considered in the present scope for seamless integration with proposed substation automation system. Please review and confirm.	Please refer clause 11.1 of Chapter PSR, Technical Specification, The Bidders are advised to visit Sub-stations site and acquaint themselves with existing facilities, the topography, infrastructure, etc.  Bidder is to quote as per provision of bidding documents.
337	Chapter 1 Project Specification Requirement (PSR) 2.2.2.1.2, (d)	Bus Bar Protection: For the 220kV kV System, Main and Check zone bus bar protection scheme with static type high impedance differential relay shall be provided. We recommend that Numerical type IEC61850 compliant high impedance differential relay shall be provided for integration with proposed substation automation system. Request you to amend the specification clause accordingly.	Please refer reply at S.No. 197 .
338	Sec 7 GCC - taxes & duties 14	Taxes & Duties We would like to know The applicable rate of business tax, income tax in Nepal. The applicable VAT rate on installation services. The applicable custom duty, VAT & other taxes for imported plant & equipment (is it reimbursable)	Please follow Clause 14. Taxes and duties of Vol. I-Section 8 –Special Condition of Contract(SCC). Applicable rates a)TDS-1.5% b) Custom tax-1%. c)VAT-13% Custom duty and VAT are reimbursable)



339		Please provide Geotechnical investigation report Topographic information / map Wind and Seismic information Highest flood level Any other relevant information	Please refer clause 11.1 of Chapter PSR, Technical Specification, The Bidders are advised to visit Sub-stations site and acquaint themselves with existing facilities, the topography, infrastructure, etc.
340	As per Volume-III, Price schedule, (Custom, VAT and other taxes).	According to our experience in Nepal, there is no taxes, we don't know if we should fill out this section. Please clarify.	It is not mandatory to fill the Custom, VAT and other taxes column.
341	As per Volume II, Section Project, Clause no 2.2.1 (d),	The required Busbar protection for 220kV system is high impedance type. However, as per Volume-II, 15-00 control relay and protection panel specification and practical experience, low impedance type Busbar protection shall be adopted. Also please clarify if centralized busbar relay can be used.	Please refer reply at S.No 197.
342	As per Volume II, Section Project, Clause 2.2.1 (e)	The existing 132kV, 33kV & 11kV bays to be automated with necessary BCUs. Please clarify if the modification work will be done directly from the existing panel or separated new panels which accommodate several BCUs to be provided.	Please refer clause 11.1 of Chapter PSR, Technical Specification, The Bidders are advised to visit Sub-stations site and acquaint themselves with existing facilities, the topography, infrastructure, etc.
343	As per Volume II, Section Project, Clause no 2.2.2.1.2 (d),	The required Busbar protection for 220kV system is high impedance type. However, as per Volume-II, control relay and protection panel specification and practical experience, low impedance type Busbar protection shall be adopted. Also please clarify if centralized busbar relay can be used.	Please refer reply at S.No 197.
344	As per Volume II, Section Project, Clause 2.2.2.1.2 (e)	The existing 132kV, 33kV bays to be automated with necessary BCUs. Please clarify if the modification work will be done directly from the existing panel or separated new panels which accommodate several BCUs to be provided.	Required Modification including required new panel also under present scope of work.
345	As per Volume II, Section Project, Clause 11.3	The augmentation and integration work related to SCADA system. Since the existing SCADA system is Siemens make, the integration work in LDC side shall be in Siemens or Owner's scope. The integration work includes software and hardware in substation side shall be in contractor scope. Please clarify.	Bidder is to quote as per provision of bidding documents.
346	As per Volume-II, 15-00 control relay and protection panel	Fuses are required to be provided as miscellaneous accessories for panel. However fuses is not convenient to maintain and install. We suggest to use good quality MCBs (ABB/Schneider/Nader) to	Bidder is to quote as per provision of bidding documents.





	specification, Clause no 9.3	replace fuses. Please clarify.	
347	As per Volume-II, 15-00 control relay and protection panel specification, Clause no 21.3	As per specification, we understand low impedance REF relay can also meet NEA requirement. Please clarify our understanding is correct.	Bidder is to quote as per provision of bidding documents.
348	As per Volume-II, 15-00 control relay & protection panel Specification. Clause no 31	We understand only relay tool kits (3 sets). Test plugs (2 nos) and test plugs for relays (if applicable) are included in relay test kit. However, relay kit, like Omicron, Megger, Ponovo is not required to be supplied. Please clarify our understanding is correct.	Yes, only relay tool kit, as specified in Chapter 15, Technical specification are envisaged under present scope.
349	As per Volume-II, 16-00 Substation Automation specification, Clause no 14	As required, in case of PLCC communication. standalone modem shall be provided. Thus only two modem shall be supplied for each new substation, one shall be installed in local control room and the other in RCC. Please clarify our understanding is correct.	Bidder is to quote as per provision of bidding documents.
350	As per Volume-II, Section project, Annexure VI	Energy meter shall meet 0.1 class. As we know, there're very limited manufacturers have this product and as per practical experience in substation, 0.2s class is sufficient. Please amend the specification to 0.2s class.	Please refer reply at S.No. 220.
351	As per Volume-III, Price schedule No.1,	As per Volume II, section project, Annexure VIII, Clause no 2, two relays shall be provided in current differential protection scheme. However, in price schedule I-A-E, section 1, only two differential relays are required however there are four line. And in I-B-E, only six differential relay for remote end are required however there are eight lines. Please clarify.	Please refer reply at S.No 9. Please also refer to the reply S.No. 81 and 117.



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